

HOME CINEMA

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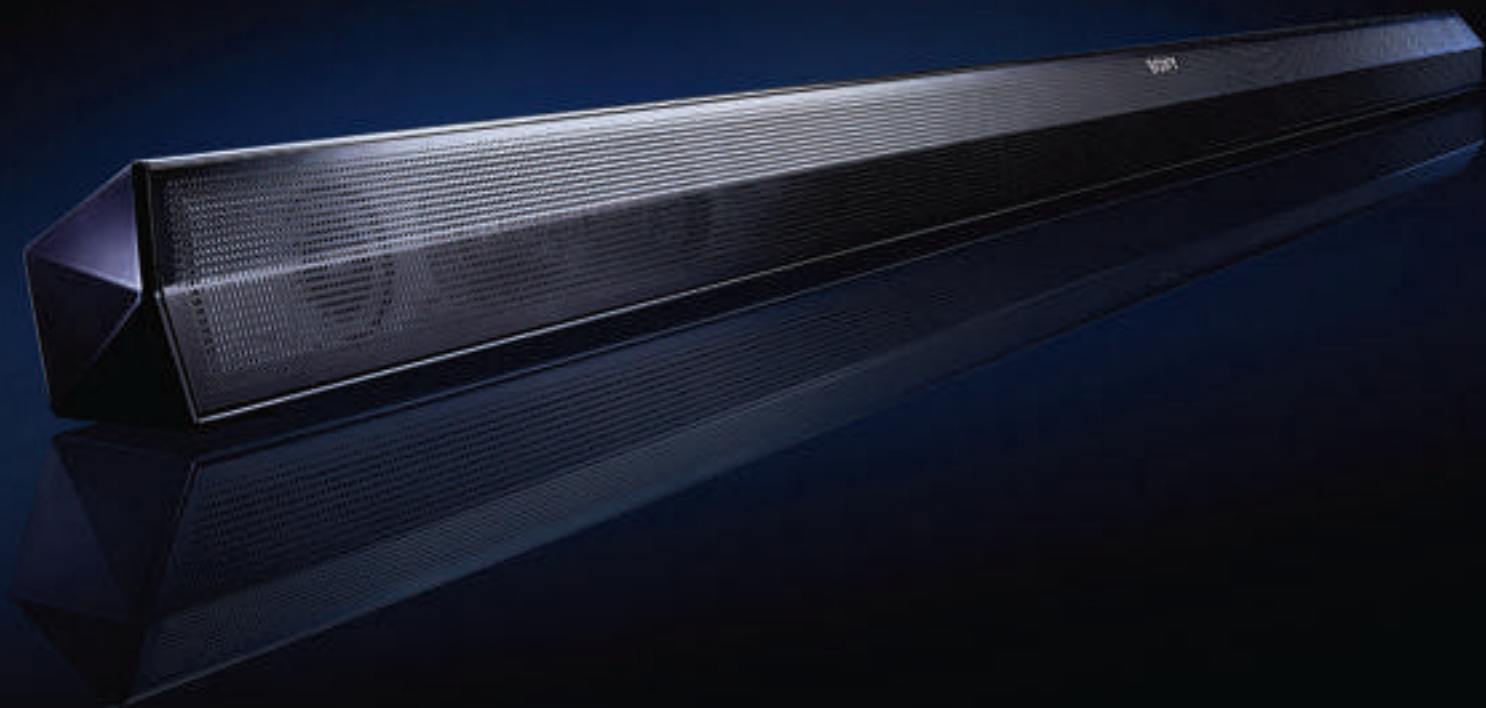
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ISSUE 232 APRIL 2014 £4.50
AUS - \$9.99 NZ - \$12.99 CAN - \$12.99



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Distributed in the UK by Seymour Distribution Ltd

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WELCOME

Unless you've been living in a cave, you'll have noticed that 4K is the current hot tech topic. The big TV manufacturers in 2014 are stocking their lineups with 3,840 x 2,160 displays, and companies like Netflix (see p20) are kickstarting the ultra hi-def content revolution. Yet while this is undoubtedly great news for home cinema fans, the ultimate aim of our hobby is to have a dedicated projection system, rather than a flatscreen TV.



This issue we've tested three projectors from JVC, Epson and BenQ. All of those are major brands, and all their models are worth investigating. Yet none offer a native 4K resolution, despite the notion that **those extra pixels are at their most beneficial when put to work on truly big screens.** Indeed, at present only Sony is offering a domestic 4K PJ, and it will cost you £8,500. Currently, then, the 4K revolution is only being televised. Let's hope this situation changes fast.

Mark Craven
Editor



MENU



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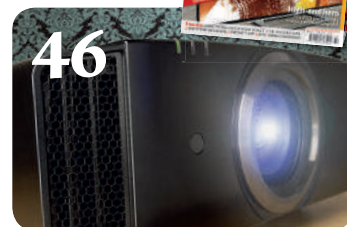
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Add some sonic thrills to your TV with this award-winning 2.1 audio solution



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BULLETIN

→ **News Highlights** **YAMAHA** Manufacturer sheds light on its new designer speaker **MERIDIAN AUDIO** High-end specialist opens London boutique **SKY** On Demand is in demand as satcaster turns 25 **DEAD OF NIGHT** Restoring the Ealing Studios classic **NEWS X10** The hottest news stories in bite-sized chunks **THE MUSKETEERS** Sacre Blu! Hit TV show coming to Blu-ray and DVD **AND MUCH MORE!**

Defy conventions

Geneva Model XXL → www.genevalab.com



Geneva's new Model XXL isn't your typical slice of AV furniture. A TV stand designed to host screens up to 65in, it mixes a seven-speaker, 600W audio system (including an 8in sub) with HDMI switching, Airplay/Bluetooth streaming and even FM and DAB radio. Control is handled by an LED display and

bundled handset, while the pull-down front panel hides rack space for your Blu-ray player. Grab it in red, white or black finishes for £2,500 approx.



HCC ONLINE...

Looking for breaking AV news, blogs, features, & reviews? For your daily fix visit us at www.homecinemachoice.com Follow us on Twitter @hccmag

Illuminating idea

Yamaha Relit LSX-700 → <http://uk.yamaha.com>

Yamaha has taken a break from cooking up multichannel AVRs to launch the Relit. Described as 'a product that redefines the term audio visual,' this designer speaker marries three full-range drivers to a top-mounted array of LEDs, which can be adjusted to taste via the brand's DTA Controller app. Bluetooth streaming (including apt-X support) is supplemented by a 3.5mm auxiliary input for additional sources. Priced at £500 approx and available in either black or brown, other features include timer/sleep functionality and a claimed 40,000-hour bulb life.



Dynaudio digs deep



Dynaudio has launched a new subwoofer designed to partner its Excite speaker range.

The Sub 250 II is the brand's most compact woofer yet (just 10.5in wide) and retails for £750. An onboard 200W amplifier powers a 9.5in long-throw bass driver constructed from Dynaudio's bespoke MSP (Magnesium Silicate Polymer) material; rear panel controls include 'slave' functionality for multi-sub setups. The sealed cabinet is available in four finishes – black, white, rosewood and walnut.

www.dynaudio.com

In-wall of sound



KEF has bolstered its line-up of custom install loudspeakers with five new high-end in-wall models. Pick of the pack is the Ci5160RL-THX, which hits the THX Ultra2 standard and is built around a 6.5in Uni-Q array flanked by four 6.5in low-frequency drivers. Joining it are the Ci3160RL-THX (6.5in Uni-Q driver and two 6.5in LF drivers) and Ci4100QL (4in Uni-Q driver and three LF drivers of the same size), plus two new subwoofers – the Ci4100QLb (four 4in bass drivers) and the Ci3160RLb (three 6.5in bass drivers).

www.kef.com/cispeakers

Absolutely affordable



Only a month after being unveiled at January's CES tech show, Wharfedale's debut Bluetooth-equipped soundbar has gone on sale in the UK. Competitively priced at just £150, the Vista 100 boasts 60W amplification, six neodymium drivers and comes armed with Sonic Emotion's proprietary Absolute 3D audio processing, which aims to widen the bar's soundstage and avoid a 'sweet spot'. No HDMI connection here; inputs run to coaxial and optical digital audio alongside phono and 3.5mm jacks.

www.wharfedale.co.uk

Meridian opens London store

High-end AV brand sets up shop among the city's trendiest designers

Over the past five years Meridian Audio has been giving consumers around the globe the opportunity to experience its products first-hand in a growing number of retail 'boutiques'. But despite the presence of just such a store in Oxford since early 2011, it always seemed more than a little odd that this proudly British brand didn't have a similar setup in London.

That all changed in February with the opening of Meridian West London, located in the heart of the thriving Chelsea Design Quarter. As Meridian Audio CEO Tim Ireland revealed when *HCC* visited the store, part of the reason for the delay in opening in London came down to securing the perfect location: 'Location is absolutely vital and it took us a long time to find the area we wanted to be in.' The Chelsea Design Quarter, which is becoming a go-to area for interior designers, fit the bill.

Created to showcase the complete range of Meridian's music and home entertainment solutions, the boutique is split into different zones that fuse luxurious design with product demonstration and consultation areas.

'Being able to demo the kit to people in a controlled environment like this is the holy grail. We're not a regular retail shop. We're not just into moving boxes. The big thing for me is that somebody can come in,



Robert Sullivan: 'Meridian West London is definitely not a regular retail shop. We're not just into moving boxes'

relax in a comfortable environment and not feel rushed,' states Meridian West London director Robert Sullivan. 'And after we've installed it, we then nurture that relationship and look after them and the system moving forward.'

Dedicated cinema room

Naturally, *HCC*'s attention quickly gravitated to the rear of the shop, which houses a dedicated home cinema room utilising some of the company's latest full-range in-wall speakers. 'Behind the projector screen we've got a pair of Meridian DSP640s taking care of the L/R, and for the centre and rears we use DSP520s. We've used the slightly smaller one up front because it helps balance the room a bit better. There's also a DSW DSP-powered subwoofer. And the whole thing is powered by an 861v8 Reference Digital Surround Sound Controller in the rack,' reveals Sullivan.

The one notable omission from the setup is Meridian's high-end 810 Reference Video System 4K projector, with a SIM2 model currently sitting in the Future Automation lift. 'Obviously, we'd

love to have the 810 installed,' says Sullivan, 'but it's a matter of space. And we've always got the projector demo facility at our Huntingdon HQ, which we can take customers to...'

Style definitely matters at West London One



PLAYLIST...

Team *HCC* spins up its disc picks of the month

Metallica: Through the Never 3D (Region B BD)

This 3D concert video finds the thrash metal icons at their absolute best. And on Blu-ray you can also skip through the film's daft side-story

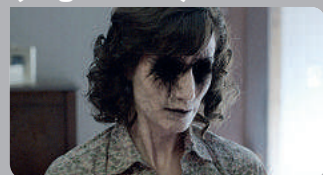


This is Spinal Tap Steelbook (Region B BD)



Speaking of rock legends, a 30th anniversary BD re-release was all the excuse we needed to dip back into this side-splitting spoof

Nothing Left to Fear (Region B BD)



The rock link just keeps on rolling with this stylish shocker produced by guitar hero Slash, which looks and sounds superb in hi-def

Safety Not Guaranteed (Region B BD)



It's a shame there are no extras, but we're just happy Colin Trevorrow's quirky comedy is finally out on BD

Kiss of the Damned (Region B BD)



Fans of 1970s European erotic horror will find a lot to like about this sensual new vampire movie

LOADING...

Team HCC's pick of the hottest BD and DVD news

Bring the action home



HCC favourite Jason Statham and James Franco will be going head-to-head when *Homefront* lands on DVD and BD on March 31. The film stars Statham as a former DEA agent whose dream of a fresh start for himself and his daughter in a small rural town is ruined by a local drug kingpin (Franco). Distributor Lionsgate has confirmed that both discs will also feature a pair of featurettes and deleted scenes.

Ray Wise speaks *Peaks*

While fans are still waiting for an official announcement regarding the Blu-ray release of cult TV show *Twin Peaks*, actor Ray Wise has been happy to spill the beans, claiming that David Lynch recently shot new material for the set and that it will also include the legendary deleted footage from *Twin Peaks: Fire Walk With Me*.

The Eyes... have it



The BFI will be issuing George Franju's 1960 shocker *Eyes Without a Face* as a 'Dual Format' Blu-ray/DVD in July. The label promises that it will include 'extensive extras'.

Sky: on-demand is in demand

Satcaster claims 1.2 billion downloads in 2013, announces EPG revamp

Sky, which recently celebrated its 25th birthday, is the UK's number one connected TV platform, according to new figures from the satcaster that reveal 4.4 million subscribers are using its net-delivered On Demand service. Take up continues at a pace, too, with the TV giant reporting that more than one million households put their Sky+HD set-top box online in the three months up to the beginning of February this year.

However, on-demand figures show that the satcaster's mobile platform, Sky Go, is actually the bigger draw – in 2013, approximately 770 million 'viewing requests' were made via Sky Go (up from 590 million in 2012), compared to 450 million via a Sky+HD box. Combined, that amounts to 1.2 billion movies and shows being enjoyed off-air.

'The rapid growth in on-demand viewing shows just how much customers love watching TV on their own terms,' says Luke Bradley-Jones, Sky's Director of TV Products. These terms apparently include gorging on catch-up TV over the Christmas break; the period between Monday December 23 and Sunday December 29 saw a new weekly high of 35 million views via Sky On Demand and Sky Go. At the same time, flicks including *World War Z* and *Man of Steel* proved the most popular from its PPV Sky Store.

Key to these figures is the number of catch-up channels the platform now offers,



Luke Bradley-Jones: 'The rapid growth in on-demand viewing shows how customers love watching TV on their own terms'

an area where the satellite company is pushing ahead of the likes of YouView and Freesat. In 2013 Sky aggressively pursued telly addicts by adding 31 catch-up channels to Sky+HD, taking the total to 60. Via Sky Go, there are 57.

EPG revamp

With catch-up forming such a large part of the Sky model, it's perhaps unsurprising that its EPG will be relaunched this Spring. Billed as 'the biggest shake up to Sky's electronic programme guide since its introduction at the launch of digital TV in 1998,' the new interface retains the brand's blue and yellow colour scheme but adopts a more graphically rich format, similar to the designs offered by Smart TVs.

'The Sky Guide redesign will make it easier than ever to find on-demand content,' said a

spokesperson. 'Sky customers can see all the content available to them up front, rather than drop into the live TV Guide and navigate from there.' The new homepage will also allow searches for shows across all live and on-demand content on Sky.



Sky's EPG is getting a fresh lick of paint

Centre completes the package

Sonus Faber outs centre speaker for its high-end Olympica range

Sonus Faber, the premium Italian loudspeaker manufacturer, has confirmed the availability of a dedicated centre channel model for its Olympica lineup of speakers.

A three-way design, the Olympica Centre (pictured) partners a tweeter and 3in mid-range driver with a pair of 6in woofers. According to the manufacturer, this enables it to claim a frequency response down to 50Hz.

The £4,000 speaker's 'lyre-shaped' cabinet uses the company's traditional blend of solid walnut and real leather for a luxurious finish. A multichannel array can be configured utilising the Olympica I

standmount (£4,400 per pair), Olympica II floorstander (£7,000 per pair) or Olympica III floorstander (£9,400 per pair).

Vox popular

Sonus Faber has also unveiled the Homage Vox centre channel, designed to be used with its flagship Aida, Stradivari, Amati Futura and Guarneri Evolution models. Another three-way design, this retails for a cool £10,000 and claims to be a 'dialogue speaker without compromise.' Grab it in Violin Red, graphite or walnut finishes. www.absolutesounds.com



Sonus Faber's new Olympica Centre can be yours for £4,000

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DIARY

Our calendar ensures that you don't miss out...

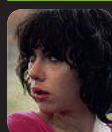
→ MARCH

07: 300: Rise of an Empire 3D

Zack Snyder writes and produces this stereoscopic spin-off from his 2007 swords 'n' sandals smash focusing on the naval Battle of Artemisium. Hunt it down in cinemas from today. www.warnerbros.co.uk

10: CeBIT 2014

The world's largest computer trade expo returns to Germany's Hanover Exhibition Grounds. Highlights from this year's five-day event include keynote speeches from Apple co-founder Steve Wozniak and Wikipedia founder Jimmy Wales. www.cebit.de/home

**14: Under the Skin**

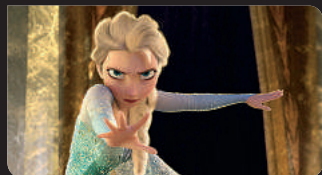
Having wowed festival audiences last year, this sci-fi thriller starring Scarlett Johansson as an alien sent to Earth to prey on unwary hitchhikers finally sees the inside of UK cinemas. www.studiocanal.co.uk

27: The National Homebuilding & Renovation Show

Planning to build your own cinema room but lack a few necessary skills? Then pop along to the Birmingham NEC for this four-day dedicated self-build and renovation event to learn the latest tricks of the trade. www.homebuildingshow.co.uk

28: Captain America: The Winter Soldier

The ninth film in Marvel's cinematic universe has the potential to be the best yet, taking its cues from Ed Brubaker's celebrated comic book story arc of the same name. The only way to find out for sure is to hit your local cinema. We'll see you there! www.disney.co.uk

31: Frozen 3D

Disney had one of its biggest hits to date with this CG-animated take on Hans Christian Andersen's *The Snow Queen*. If you want to know what all the fuss was about, you can pick it up on DVD, BD and 3D BD from today. www.disney.co.uk

→ APRIL

03: HCC #233

The next issue of your favourite home cinema magazine hits the stands today, packed with hardware tests, features, outspoken opinion and in-depth software reviews. www.homecinemachoice.com

INTERVIEW

Back from the Dead...

BFI restoration maestro **Ben Thompson** reveals how the 1945 Ealing Studios classic *Dead of Night* was brought back to life on Blu-ray



Can you tell us a little about your role as Section Leader – Image Quality at the BFI National Archive?

'You might say that I'm a technical coordinator of sorts between the smaller scale restoration and preservation work we do on-site at the Archive and the work we do with external partners on larger-scale remasters and restorations. *Dead of Night* falls into the latter category. However, we are scaling up to the point where we will be able to do full feature restoration as well.'

Were you able to get hold of *Dead of Night*'s original camera negatives for the restoration?

'Unfortunately not. We're not certain about the fate of the original camera negative. Here at the BFI we only had projection prints and odd reels of dupe negatives, which were useful as reference material, but not much more. However, because the restoration was done in conjunction with StudioCanal, we had access to its film materials held at Pinewood Studios.'

'Ultimately we had the option of using a fine grain 35mm positive and a 35mm dupe negative. We went for the dupe negative because it was much more complete than the fine grain positive, which had a lot of frames missing. That's not to say that we wouldn't consider using the fine grain if necessary, but we were very happy with the results from the scan of the negative.'

What resolution was the film scanned at?

'It was a 2K scan. Although it's becoming more and more commonplace to scan at 4K – and here at the Archive we're proud of the capacity we have to scan at 6K – at the end of the day it's all a matter of budget.'



When it comes to a restoration, what is the ultimate goal you are aiming for?

'I'm not a fan of seeing something "over-cleaned". What I enjoy is being able to rectify the sort of faults in the imagery that have come about as a result of duplication. Things like softness, unsteadiness and warping.'

'For example, in the case of *Dead of Night*, some of the optical mixes from one shot to another are probably fifth-generation! So we tried to make those transitions appear more comfortable, rather than making them seamless. The dupe effect is still visible, but it's not as problematic as it was.'

Were there any other significant challenges with regards to this particular restoration?

'It was mainly the softness of the image. So we used an aperture correction restoration tool to sharpen the image throughout. I'm always cautious about sharpening, but this was applied very subtly with only a few shots picked out for a little more work.'

'The other major issue was the flicker in the scans. Over the past five or so years audiences have been trained to expect an image that doesn't flicker too much, to the point that they see faults in films that used to be perfectly

Cue marks, dirt and scratches were among the problems that needed fixing

acceptable. As it was definitely a printing fault in the case of *Dead of Night*, the whole film was de-flickered slightly.

'The most problematic part when it came to flicker was reel seven [the golf segment]. This reel clearly came from a different source, as the rest of them were mute and it had an optical soundtrack. One of the drawbacks of this is that the variable density of the soundtrack portion can result in flares into the image. You can tell because the fluctuations happen more or less in sync with the people talking. So that had extra de-flicker work done.'

'Another issue with that reel came about during an optical mix to a shot of the sun in some clouds. Because of the limited dynamic range of the duplicate stocks the sun is quite subtle in the mix, but once it gets beyond that and goes to the negative it suddenly pings out brightly and looks like an effect. So we reduced the contrast slightly.'

'Ultimately, it's all part and parcel of the remastering process.'

Dead of Night is available to buy now courtesy of StudioCanal and is reviewed on p103

This month's top 10 news stories in handy, bite-sized chunks...



1 Datasat delivers again
Having been bowled over by Datasat Digital Entertainment's RS20i audio processor last issue, we can't wait to see how the company's (slightly) more affordable new LS10 compares. Priced around £10,000 – or £13,000 if you opt for the Auro-3D upgrade – this AV mastermind can marshal speaker configurations up to 13.1, and offers ten-band parametric EQ per channel and advanced bass management with high- and low-pass filters.

2 Sony hives off TV business
As part of its ongoing restructuring process Sony has revealed that it intends to split off its TV division from the rest of the company as of July this year and operate it as a wholly-owned subsidiary. The company also revealed that it plans to shift its flatscreen TV focus almost entirely onto high-end models. Well, it worked for Pioneer...

3 Yamaha adds Spotify upgrade
Yamaha has announced the availability of a firmware upgrade that adds Spotify Connect to its current range of receivers. The firmware is available for the Aventure CX-A5000 pre-amp and RX-A3030, RX-A2030, RX-A1030, RX-A830 receivers; the RX-XV775, RX-V675, RX-V575, RX-V475 and RX-V500D RX-V series receivers; and the RX-S600 and RX-S600D slim AVRs.

4 Catch up with Yesterday
UKTV has launched seven-day catch-up services on YouView for its Yesterday and Really channels. 'The launch is another important milestone for us in ensuring viewers have "anytime, anywhere" access to our content,' stated Dan Fahy, UKTV's head of commercial development.

5 BT enters 4K sports race
Sky isn't the only broadcaster looking into broadcasting sport in 4K, as BT CEO Gavin Patterson has confirmed that his company is also trialling the technology, with proposals based on investment in faster internet speeds.

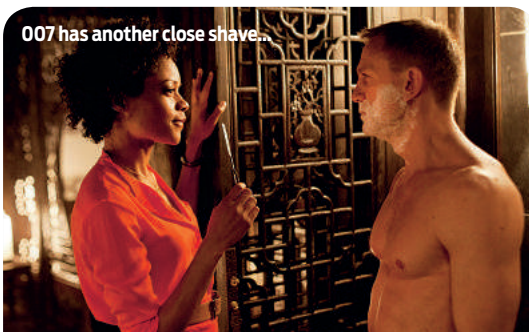
6 Crowd-sourced speakers
London-based speaker specialist Ferguson Hill has turned to AV fans in an effort to try and drum up the finances to help bring its latest Clear Speaker System to market. Using crowd funding website Kickstarter (www.kickstarter.com), Ferguson Hill's 'unique' high-end system will only become a reality if £149,500 is pledged by 6pm on March 10. Various packages are on offer for interested audiophiles.

7 Cast your vote on Amazon's latest TV pilots
Amazon has released a second round of original pilot TV shows for its Instant Video and LoveFilm streaming services in the US and UK respectively. As with last year's batch, viewer feedback on the 10 new pilots will help Amazon decide which will go into production as full series.

8 Android gets THX app
Almost a year after the iOS version made its debut, THX has finally released an Android version of its video and audio system tune-up app for smartphones and tablets. The app, which requires your device to run Android OS 4.2.2 or later, is available through the Google Play store and costs around £1.20.

9 Tech pioneer axed as Sony closes division
Sony Pictures Home Entertainment has closed down Sony Pictures Technologies. Among the those laid off are Chris Cookson, who had been president of the division since 2008 and helped spearhead the company's transition to 4K and digital distribution.

10 Bond is on top as UK video market shows growth
A 40.2 per cent increase in spending on digital video services and 10 per cent rise in Blu-ray disc sales helped make up for a drop in DVD sales and saw the video market continue to grow in the UK last year. Figures released by the BVA (British Video Association) show that consumer expenditure increased from £2,245 billion in 2012 to £2,256 billion in 2013, with *Skyfall* coming out on top as the year's best-selling DVD and BD.



PREMIERE

What's happening in the world of TV and films...

Ghost of a chance

Snow White and the Huntsman director Rupert Sanders has been tapped to direct a live-action take on *Ghost in the Shell*. However, given what happened with *Akira*, who knows if it will ever happen.

Superheroes delayed



Warner Bros. has pushed back the release of *Batman vs. Superman* from July 2015 to May 2016. The studio has given no reason for the delay, but it does mean that the film will no longer be competing with Marvel's *Avengers* sequel.

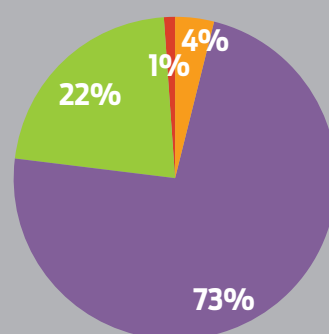
Whitaker gets Taken

The pieces are finally falling into place for *Taken 3*. While there's no word on just who or what will be taken this time out, it's been announced that Forest Whitaker will be joining stars Liam Neeson and Maggie Grace in the onscreen action. Also returning is director Olivier Megaton, who has hopefully learnt how to shoot coherent fight scenes since he helmed *Taken 2*...

WE ASKED...

How many subwoofers do you use in your home cinema setup?

None One Two Three or more

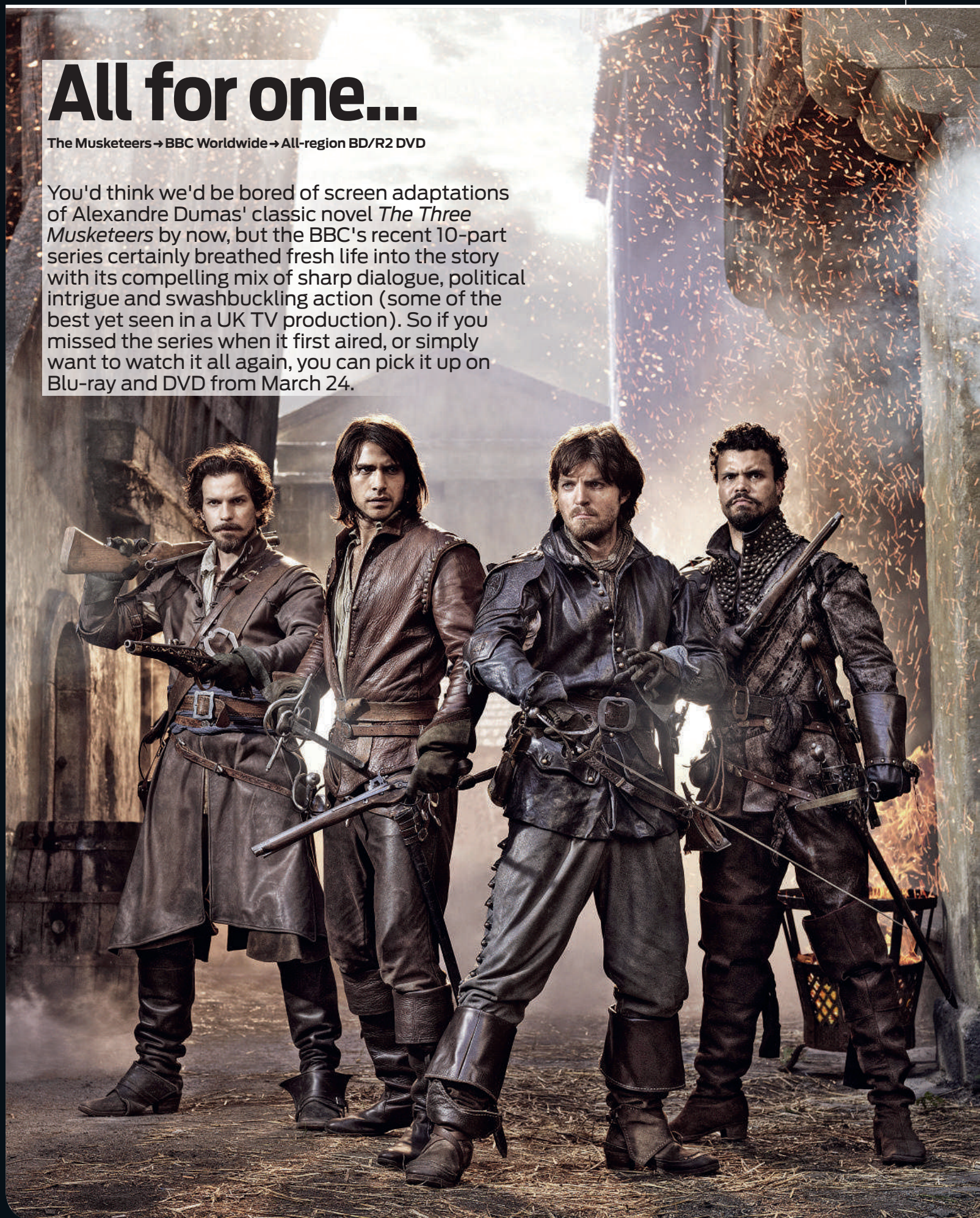


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All for one...

The Musketeers → BBC Worldwide → All-region BD/R2 DVD

You'd think we'd be bored of screen adaptations of Alexandre Dumas' classic novel *The Three Musketeers* by now, but the BBC's recent 10-part series certainly breathed fresh life into the story with its compelling mix of sharp dialogue, political intrigue and swashbuckling action (some of the best yet seen in a UK TV production). So if you missed the series when it first aired, or simply want to watch it all again, you can pick it up on Blu-ray and DVD from March 24.





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'We're changing the shape of TV forever'

Samsung is deadly serious when it says this is the year of curved 4K/UHD TV. **Steve May** reports from its 2014 European product showcase



If you want a new 4K/UHD TV from Samsung, you'll won't be able to get it flat...

THE BRAND THAT made TV design as big a deal as picture quality says it's changing the shape of the humble gogglebox forever. Speaking at Samsung's scene-setting annual European product forum, company president and CEO BK Yoon promised that your next TV isn't just going to deliver much higher picture resolution, it's going to curve like a cinema screen, too.

In fact, Samsung is so convinced that we'll all be seduced by its curves that the Korean giant has decided to make all its new 4K/Ultra HD TV curl. Yoon preceded a string of executives, all of whom delivered more or less the same unequivocal message: '2014 will be the year of curved Ultra High Definition TV.' Decompression, it seems, is not an option.

'When we introduced our first "Bordeaux" sets back in 2009 we took the world of TV design by storm,' boasted Michael Zoeller, Samsung's sales and marketing chief. 'Now we're going to do the

same again. But the curve is about much more than design – it's about the visual experience and picture quality. There's a lot of research out there that says the human eye is naturally drawn to strong curves!'

Zoeller went on to explain that not all curves are created equal. 'Our TVs are the most curved TVs in the world. The stronger the curve, the more immersed you are.' Samsung's new 4K sets are said to mirror the curvature of the human eye. This somehow equates to images looking more natural (admittedly, we got a bit lost at this point with the hokey science).

Marching forward

It's all contentious, revisionist stuff. But Samsung rarely puts a foot wrong these days. It's the biggest seller of TVs in Europe by a massive margin, and has been for the past eight years. What was once seen as a budget tech brand now challenges Apple on a daily basis for leadership in smartphones and tablets.

Indeed, on the morning of the Euro forum, Samsung announced a far-reaching partnership with Google that will see the two giants sharing patents for a decade. The deal heralds something of a tectonic shift in the connected gadget landscape. It not only removes the threat of litigation between the two brands, but creates a technology hardware and IP powerhouse with virtually no equal.

Even so, the move to curved screens remains a massive gamble and could prove divisive. It wasn't that long ago that 3D was heralded by every TV vendor as the future of television, but massive disinterest has rendered the tech little more than an unpublicised feature. Similarly, OLED was deemed the poster boy for futuristic panel tech, but now Samsung has quietly walked away from OLED, as it remains too expensive to develop for the mass market. Will curved screens follow, or is Samsung starting something big here? The company itself predicts that more than a million of us will be tempted to buy a curved 4K/UHD TV in 2014, rising to 3.3million by 2017. Those numbers could prove to be conservative if curves really catch on with fashionistas.

Guy Kinnell, head of TV and AV for Samsung UK, had no qualms about the new form factor. The curvature, he again told us, mimics that of the human

'Samsung will be the first brand in Europe to offer 4K TV owners a movie download service, via a sub-£300 HDD pack'

eye and has a panoramic effect that makes the screen seem even bigger than it is. 'It improves motion too,' he said.

This Spring Samsung will bow six curved UHD sets, ranging from 48in to a flagship 78in UE8500 model, and they'll be packed to the gills with features and frills. Once again, all will be Smart and connected, responding to gestures and spoken commands.

First impressions of this fleet are overwhelmingly positive; image quality is outstanding. The UHD sets – Samsung prefers to call them UHD rather than 4K, because it's 'an expansive term that will also be used ultimately for 8K' – offer a level of dynamics and detail that's quite astonishing. You can comfortably sit close without spotting pixels or feeling eyestrain. And when you get close in the viewing sweet spot, you get a definite sense of immersion and intensity that's immediately different from watching a conventional flatscreen. Demo footage of a fast-moving flight through a valley actually left us feeling disconcertingly dizzy.

Sit off-axis though and you'll just feel like you've arrived too late to get decent seats at your local Vue.

Interestingly, Samsung didn't exhibit its flexible curved screen prototype at the Euro forum, which means it's certainly not going to be a real product



Samsung's 4K displays mimic the curvature of the human eye

UK AV and TV chief Guy Kinnell (right) wouldn't be drawn on an ETA for flexible, curved screens



any time soon, although when asked if the brand was developing any new flat 4K screens, Guy Kinnell did suggest buyers could always buy a flexible screen and flatten it themselves.

But while the problem-solving flexi prototype was absent, the brand did preview its astonishing 21:9 105in UHD TV. No news of a launch just yet, but this is one mega screen whose curves we could all learn to live with.

Solving the content conundrum

Perhaps more important to some AV fans than unusual form factors is the news that Samsung will also be the first TV manufacturer in Europe to offer buyers of 4K TVs a movie download service, in the form of its UHD Video Pack player. Specific details are sparse – even Samsung executives we talked to seemed a little vague – but the gist is that this small media server will have a 1TB hard drive and two UHD movies pre-loaded. You'll then be able to download an additional 48 flicks, following a deal struck with 20th Century Fox and Paramount. The content selection is a mix of recent blockbusters and back-catalogue titles, including *Life of Pi*, *Star Trek*, *A Night at the Museum* and *X-Men Origins: Wolverine*. The UHD pack will sell for less than £299, with movie download prices still to be confirmed.

When asked if the player would work with rival brand's 4K TVs, Samsung's UK executives shrugged collectively and said they didn't know, as they've not had one yet and don't really know how the system works. So the jury's out on that, at least for the time being... ■

GET SET FOR FOOTBALL

One-button preset aimed at World Cup addicts

4K/UHD wasn't the only big new thing at Samsung's European conference. The brand's 2014 TVs will also boast a feature called Football mode (not least because Samsung is one of the official sponsors of this year's World Cup). This will be available on all its new Smart TVs, not just the Pringle panels, and is essentially a one-button preset that optimises image quality for soccer (pictures are brightened and made smoother) and gives the audio a stadium ambience. Impressively, you can connect a USB hard drive to the TV and even create your own instant replays; a button on the zapper will bookmark any on-pitch highlights. Gimmicky to be sure, but certain to be handy come June. Of course, if you're planning to get a display that bends it like Beckham, remember to call dibs on that prime viewing position first...



Will **NETFLIX** be the saviour of 4K?

With the arrival of Netflix 4K, the internet hopes to oust the disc to become every home cinema fan's premium source.

Steve May takes a closer look





HOW TO GET NETFLIX 4K

This is what you'll need to stream 3,840 x 2,160

A second-gen 4K TV

Netflix is employing the HEVC H.265 codec, so you'll need a 4K display with the relevant decoder. That rules out first-gen models – even Panasonic's HDMI 2.0-equipped WT600 – unless external tuner boxes are introduced. Many models arriving this year will support H.265, however, including those from Samsung, LG, Sony and Panasonic



Fast broadband

Adaptive 4K streams from Netflix will run at 15.6Mbps and 11Mbps, so this figure is what you need to aim for with your broadband package. Traditional ADSL offerings are likely to fall way short, as even those that are marketed as up to 16Mb typically don't reach such a speed. Fibre optic, such as that offered by BT Infinity (pictured), is the way to go if it's available in your area



4K is the format for the internet, says Netflix's Joris Evers

NETFLIX IS ABOUT

to turn the world of home entertainment upside down. The ubiquitous subscription Video on Demand service, which began as a game-changing mail-delivered disc rental service in the US before evolving into an all-you-can-eat streaming global behemoth, is set to become

the first commercial 4K/Ultra HD content provider.

The implications of this are immense. Up until now, the finest home entertainment was always delivered on packaged media, closely followed by HD broadcasts. Internet-delivered telly was just the home of fuzzy cat videos.

But with Netflix 4K, IPTV can now make a legitimate claim for home cinema's high ground. The shockwave could prove seismic. Admittedly, there won't be an abundance of 4K streaming coming from Netflix servers at launch, but the content choice is certain to snowball. Indeed, the lure of integrated 4K Netflix could even accelerate UHD TV sales. Analysts are increasingly optimistic. According to the market magicians at Futuresource Consulting, around 11 million UHD sets will be sold globally this year.

To get more detail, HCC had an early gander at the service with Netflix's corporate communications director Joris Evers. 'We like 4K, it's the TV format for the internet,' he said as he ushered us in front of a 65in 4K TV playing 2160p eye candy. 'This is the first time that the best video quality possible is only going to be available through the 'net. There's no 4K physical format – at least not yet – and I don't believe it's going to be on the horizon either. That's why we're excited about this, why we're at the forefront.'

Netflix looks certain to be the only 4K game in town, at least in the short term. Set-top box makers and over-the-air broadcasters won't make any moves until HDMI 2.0 populates, he suggests. 'They won't want less than 60fps.' This, of course, isn't an issue when you don't need to find a way into the set.

'TV manufacturers are not going to sell many 4K TVs if there's no content for them. That's why [Netflix CEO] Reed Hastings was on stage with LG and Sony at the CES, talking it up.'

Why Netflix is first with 4K

So how has this revolution happened? Netflix's decision to start producing its own content has clearly given it a unique advantage when it comes to fast-tracking Ultra HD. 'We have our hands and feet in the entire 4K chain,' says Evers. 'We work with content creators for our original series and we're also involved with delivery through our streaming cloud service. We also work closely with ISPs and TV manufacturers.'

Indeed, Netflix's ability to circumnavigate the set-top box business and conventional media puts the company in a powerful position. It will roll out the new service on 4K TVs with integrated HEVC H.265 decoders, which in all likelihood will be most of the 2014 crop.

'We think Ultra HD delivered direct to TV will be the way most people will get 4K going forward,' predicts Evers. While there will be no increase in the basic cost of a Netflix subscription, users will need a superfast fibre broadband connection to get 4K. Netflix will actually be running two adaptive 4K streams, one at 15.6Mbps and the other at 11Mbps. Networks unable to sustain either throughput will default to 1080p. The process is identical to that offered with Netflix Super HD, which until now has been its premium proposition.

'The process is seamless and the system is designed to prevent re-buffers, so that you can watch a movie all the way through and enjoy the best picture,' he says optimistically.

So is the lack of bounteous bandwidth in certain parts likely to slow down uptake? Not according to Evers and his stream-weavers. 'Connection speeds are improving and the internet is just going to get faster and faster.' That may be true, but if you're serious about watching 'net-delivered movies, you may find an upgrade to your broadband package is required.

The Netflix 4K experience

So what's the Netflix 4K user experience actually like? Well, much like regular Netflix to be honest, only sharper. Cleverly, Netflix servers can recognise that a user has logged on via a compatible 4K display, and this triggers an additional 4K content row to appear amid the usual UI selection of new releases, genres and recommendations. Once selected, the stream locks and a 3,840 x 2,160 picture is delivered.

The initial content selection is set to comprise a freshly remastered *Breaking Bad* (unlike the later seasons which were shot native 4K, Walter White began his crime spree on film) and *House of Cards: Season 2*, which is being shot native 4K at 24fps. Evers says there will also most likely be a selection of demo clips, travelogues and so forth. However, the company, he says, is 'completely focused' on expanding its UHD catalogue. 'Most of our effort and energy will be focused on acquisitions,' he reveals. On top of that, Netflix has already committed to shooting all its own programming in 4K – which is now a growing slate of one-off dramas and mini-series.

'We know we will only have a limited audience in the beginning,' Evers says. 'But our content offering will grow as 4K TVs get cheaper.' The man from Netflix predicts that over the next five years, all large TVs will become Ultra HD – 'then the number of titles we can offer will grow accordingly.'

Early impressions are that image quality looks excellent. Fine detail performance is undeniably impressive. However, the difference between these nascent Netflix streams and upscaled Blu-ray was not quite as dramatic as you might imagine. Indeed, at times the demos didn't seem to offer the whizz-bang wow seen from Sony's upscaled Mastered in 4K Blu-rays. But there's no question 4K looked better than regular Super HD Netflix.



Want to take advantage of Netflix's 4K content? You'll need a second-gen 4K TV, such as LG's flagship 105in model launched at CES 2014

Unfortunately, there's no corresponding upgrade to audio performance. Netflix will still only sport a 5.1 Dolby Digital soundmix at best. Of course, it's too early to come to any coherent performance conclusion based on our initial exposure, and compression technology is likely to be a movable feast anyway.

Netflix has chosen to side with HEVC H.265, an early industry codec favourite. If your 4K TV lacks an HEVC decoder, or does not have a compatible tuner box, it'll not qualify for the 4K stream. This simultaneously rules out the service appearing on Blu-ray players and next-gen games consoles. 'Perhaps early adopters that bought first-gen 4K TVs will buy another one as the new models come out?' muses the Netflix man. 'We decided on HEVC a while back; all our partners have HEVC decoders and we feel this is the right technology because of that.'

HEVC is somewhat different from rival codec VP9, an open-source compression technology advocated by Google and used on YouTube 4K. It transpires that the open-source nature of VP9 was one of the reasons Netflix opted for the royalty-free controlled HEVC environment. HEVC supporters tend to contribute patented research for which they're rewarded via a patent pool, explains Evers. It's these proprietary picture processing investments which will continue to give HEVC the edge in terms of image quality.

Netflix adds that 4K offers viewers more than just a resolution upgrade: 'We'll also be supporting 10-bit colour depth [by way of comparison, Full HD TV, DVD and Blu-ray offer 8-bit] and high frame rates up to 60fps,' says Evers. 'With 8-bit AVC H.264 you get 16.8 million colours, but we'll be supporting 10-bit colour which gets you about 1 billion colours. That means much more natural-looking pictures' ■

NEVER MIND TV SHOWS, WHAT FILMS CAN I WATCH?

Netflix is moving forward with original series, but does its movie content stand up to scrutiny?

The US streaming company has scored a victory over rival video-on-demand services by getting involved in content production (including deals with Marvel), but this is primarily focused on TV series. If you're only interested in films, Netflix's library can feel somewhat disappointing.

Browse the HD section and there's a lack of recent titles. When we searched in February, flicks from 2013 that caught our eye were *Hansel and Gretel: Witch Hunters*, *GI Joe: Retaliation*, *Last Stand* and *Olympus Has Fallen*. Keying in *Skyfall* yielded a shake of the head. Ditto *Oblivion*, ditto *Pacific Rim*.

And it's not just new titles that are MIA. Search for the classic sci-fi *Alien* and

you're told it's unavailable, with Netflix pointing you in the direction of *Starship Troopers* and *Species* instead.

Netflix is reliant on studios making material available to stream, and it's fighting battles with companies such as Sky in the UK and Hulu in the US to secure rights. However, in its recent annual report, Netflix confirmed it had a commitment of over \$7bn (most of it for the next five years) in 'streaming content obligations,' essentially the cost of acquiring movies and TV shows, so its catalogue will surely grow. TV-style series, however, seem to be its driving force.





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101

Blu-rays you must own!

With movie streaming services becoming bigger and better and even TV manufacturers getting into the content-delivery game, Blu-ray is facing its biggest battle since the days of HD DVD. But if you are thinking of leaving the physical format behind, make sure you get these discs first...

IF YOU'RE ANYTHING like Team HCC, your disc shelf is groaning under the weight of titles that, actually, you can't even remember buying and will never watch again. And at the same time, there may be favourite films that you've owned on VHS, LaserDisc or DVD but still haven't got around to picking up in hi-def.

The following list is here to help you knock your Blu-ray collection into shape. A mix of Hollywood classics, sci-fi stunners, animation,

comic capers, genre outings and more, it will always give you something you want to watch.

Picking the perfect platters

So how did we arrive at our 101 key titles? Firstly, we set ourselves some rules. TV boxsets aren't included (that's another list in itself), and we've only chosen Region B discs (although we do note if superior versions are available on import).

Beyond that, our top discs have been picked for obvious reasons. Reference-grade audio or astonishing image quality is, in some cases, enough to allow a Blu-ray into our elite club, but it helps if the movie isn't a stinker, too. Similarly, some titles have sneaked in despite less than best-in-breed AV quality, simply because they're genuine classics.

Our original shortlist ran to over 400 discs. We argued for days, and then whittled it down to the following 101. Enjoy! ➤

101

The Complete Matrix Trilogy

The Wachowskis' sci-fi smash may be indelibly linked to DVD thanks to the way that it pioneered interactive features, but the trilogy is an even more compelling prospect on Blu-ray courtesy of its stunning AV performance. It's just a shame this UK set misses out on *The Animatrix* and the two bonus DVDs included with the US version.



100

Transformers: Dark of the Moon – Limited 3D Edition

'More of everything' seems to be the credo director Michael Bay adopted for this third *Transformers* film, ensuring a cavalcade of stereoscopic action and astonishing 7.1 sonics that will push your system to the absolute limits.



099

The Servant

Never before has the visual artistry of Joseph Losey's subversive class-war drama been so obvious as it is in the 1080p image that takes pride of place on this immaculately restored Blu-ray. It also doesn't hurt that StudioCanal's disc is loaded with interviews, both new and archival. A quality release all round.



098

Scott Pilgrim vs. The World: Level Up! Collector's Edition

A rom-com like no other, Edgar Wright's anarchic love letter to movies, music and retro videogames cemented his place as one of the most exciting and imaginative directors to come out of the UK in decades. No wonder Marvel was so keen to snap him up to helm its 2015 superhero flick *Ant-Man*.



097

Invasion of the Body Snatchers

This UK Blu-ray of Philip Kaufman's 1978 sci-fi remake is more than a match for its US counterpart. Drawing on that disc's excellent HD master and its bonus features, the UK disc also boasts some exclusive extras and adds the director's commentary to the HD platter – in the US it was relegated to an accompanying DVD.



096

Samsara

Billed as 'a non-verbal guided meditation on the cycle of birth, death and rebirth,' *Samsara* isn't your typical piece of home cinema demo fodder. However, as a result of being shot on 70mm, scanned in 8K and mastered at 4K, this astonishing Blu-ray delivers some of the most breathtaking 1080p imagery you'll ever see.



095

Tangled 3D

If you want to really test your home cinema setup's 3D capabilities, then you absolutely have to pick up this Disney 'toon – there's a good reason why the 'lantern sequence' has become the *de facto* crosstalk test around these parts. And just as importantly, this animated update of *Rapunzel* is riotous fun for film fanatics of all ages.



094

How the West Was Won

If you ever wanted proof that Blu-ray has done more to recreate a cinematic experience in your home than any other format, then look no further than the optional 'SmileBox' presentation of this lavish 1962 Western that emulates the curved Cinerama widescreen process on your telly. Fabulous.



093

Harry Potter and the Deathly Hallows: Part 2

This eighth film in the record-breaking franchise is both a fitting finale to the young wizard's japes and a brutal test disc. Your display's black level response is given a workout here by one of the darkest films ever committed to celluloid, and tricky skin tones and colours abound, too.



092

The Book of Eli

A go-to disc for when you want a demo of perfect surround sound steering – especially the scene where Gary Oldman and his goons lay siege to the prairie shack – *The Book of Eli* has the kind of soundmix that makes spending thousands of pounds on speakers and amps so worthwhile.



091

Time Bandits

Restoration maestro James White worked his magic on last year's HD re-release of Terry Gilliam's freaky fantasy. Restoring the film using a brand-new 2K scan of the original camera negatives, the resulting disc is a massive step forward in quality from previous versions, eliminating print damage and restoring the lustre to the striking visuals.



090

The Bridge on the River Kwai: Collector's Edition

The amount of work that Grover Crisp and the team at Sony Colourworks invested in restoring David Lean's 1957 masterpiece was every bit as epic as the movie itself. If only all studios put this much care and attention into releasing classic titles in HD...



089

The Evil Dead

There are some who will try to tell you that a micro-budget horror film shot on 16mm has no place on Blu-ray. This impeccable hi-def presentation of Sam Raimi's 1981 splatter classic begs to differ. A superior disc in every regard – this UK release is only let down by the decision not to offer the original 1.37:1 framing alongside the 1.85:1 version.

088

Alfred Hitchcock: The Masterpiece Collection

This bumper boxset brings 14 of the visionary filmmaker's greatest films to Blu-ray. There are a few AV hiccups along the way (*Frenzy*'s frenzied use of DNR anyone?) but most of the films look sensational and come loaded with brilliant bonus features.



087

Thor

Praise the Gods! The fourth entry in Marvel's interlinked 'cinematic universe' brings the thunder to your movie room with a ferocious DTS-HD Master Audio soundtrack of superheroic proportions. The skillfully engineered 7.1-channel track offers impeccable positional effects, delivers incredible dynamic range and bowls you over with its all-powerful bass.



086

La Grande Illusion

Working from a new 4K restoration done in association with La Cinematheque de Toulouse, StudioCanal pulled out all the stops for the hi-def debut of Jean Renoir's award-winning war film. Frankly, we'd be amazed if *La Grande Illusion* ever looked as good at any point in its 75-year history as it does on this disc.



085

Pacific Rim 3D

Guillermo del Toro knows that few things are more satisfying than watching giant robots and monsters knocking lumps out of one another, and this blockbuster steps things up another gear by rendering the epic action in 3D. If UK buyers had got the 7.1 mix that was on the US disc, this would have ranked even higher.



084

13 Assassins

Redolent of the very best of Akira Kurosawa, Takashi Miike's update of the traditional Japanese *jidaigeki* (period drama) pits a small band of samurai against overwhelming odds – climaxing with a spectacular 45-minute showdown between the titular 13 assassins and an army of more than 200 soldiers.



083

Rango

Putting the 'wild' back into the Wild West, the first (and only, to date) fully-animated feature from visual effects powerhouse Industrial Light & Magic looks and sounds every bit as good as you'd expect in hi-def. In fact, we'll got out on a limb and say that the AVC 2.40:1 1080p encode is as close to perfection as the technology will allow.



082

Jurassic Park: Ultimate Trilogy

Although Universal has been tinkering with the DNR and edge enhancement settings in its digital remaster toolbox again, this trio of monster movies still looks pretty impressive and have now been granted 7.1-channel DTS-HD MA remixes that put the stomp into their revolutionary sound design.



081

Sherlock Holmes: A Game of Shadows

An example of a sequel that's better than the original, this second slice of Victorian sleuthing is thrilling from the off and includes one of the best demo sequences of the last decade, with director Guy Ritchie employing all his camera trickery to turn a simple firefight into a thing of beauty.

080

Oblivion

This Tom Cruise science-fiction flick deserves – nay, demands – a place in every self-respecting AV-hedz' collection purely on the strength of its picture-perfect AVC 2.40:1 1080p visuals (including the astonishing special effects) and equally mesmerising DTS-HD MA 7.1 soundtrack. In particular, *Oblivion* gives your subwoofer some deliciously deep bass notes to chow down on.



079

Halloween: 35th Anniversary Edition

When this seminal horror classic debuted on Blu-ray it did so with a revisionist look that favoured vivid reds and blues in favour of the more neutral look of the original photography. Last year's impressive anniversary reissue not only corrected this but also managed to dig up more picture detail as well.



078

The Girl with the Dragon Tattoo

There's a lot to admire about David Fincher's American adaptation of Stieg Larsson's bestselling novel, but what lifts its up to the position of being a must-own Blu-ray is the exhaustive extras on offer and the skill with which the DTS-HD MA 5.1 mix presents Trent Reznor and Atticus Ross's multilayered score.



077

The Godfather: The Coppola Restoration

Paramount made film fans an offer they couldn't refuse with this lavish boxset for Francis Ford Coppola's crime saga. Yes, the hi-def masters are now showing their age a little and could be improved upon, but these discs are still the best the films have looked in years.



076

Quatermass and the Pit

Of all the Hammer horrors restored for Blu-ray by StudioCanal, this remains the very best. Nigel Kneale's superior shocker looks and sounds superb (the improvement from the old DVD is quite simply remarkable) and it comes backed up by a fascinating selection of extra features.



075

Argo: Declassified Extended Edition

If nine additional minutes of footage isn't enough to persuade you to pick up this Blu-ray re-release of Ben Affleck's award-winning thriller, it also carries new special features and is bundled with exclusive memorabilia, including a poster, a map of Tehran and a 64-page booklet.



074

Rush

This brilliant biopic of Formula One rivals James Hunt and Niki Lauda does a fantastic job of capturing the look and feel of the sport during the 1970s. And its refined AVC 2.40:1 Full HD visuals and exhilarating DTS-HD Master Audio 5.1 soundtrack make this BD the next best thing to driving an F1 car yourself. Probably.

073

Universal Classic Monsters: The Essential Collection

Calling anything 'essential' is just asking for trouble, but Universal got it spot on with this feature-packed collection of eight legendary monster movies – including the alternate Spanish-language version of *Dracula* and a 3D version of *Creature from the Black Lagoon*!



WE'RE STILL WAITING...

Potential Blu-ray releases to keep an eye out for

More James Cameron

The continued absence of James Cameron's *The Abyss* and *True Lies* from BD shelves is a travesty. 2014 could be a good year for Cameron fans, though, as it marks those movies' 25th and 20th anniversaries respectively. If they aren't released this year, they probably never will be.

Back-catalogue Bay

Over-long, over-loud and over-violent, Michael Bay's *Bad Boys 2* is action cinema at its most divisive, but that's no excuse not to give this blockbuster the BD it merits. With *Bad Boys 3* rumoured for 2015, could a tie-in release be on the cards?

A New Hope

The original (non Special Edition) *Star Wars* trilogy is still missing on BD, presumably hidden in George Lucas' attic. But now he's sold the rights to Disney...

Shark tales

Jaws finally surfaced on Blu-ray in 2012, which was great. Now hurry up and release *Jaws 2* and *3*. We're not all that fussed about ...*The Revenge*, though



072

The Passion of Joan of Arc

The Masters of Cinema range deserves high praise for its treatment of Carl Theodore Dreyer's silent masterpiece. Not only does the platter include a new restoration of the original 1928 version (in both 20fps and 24fps), but also the 1950s Lo Duca re-edit.



071

Sucker Punch

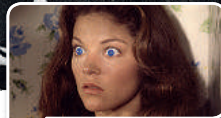
Less a coherent movie, more a disjointed collection of outrageous action set-pieces, Warner's BD is indispensable courtesy of *Sucker Punch*'s endlessly inventive, subtle-as-a-sledgehammer DTS-HD audio mix.



070

Monty Python and the Holy Grail

It may not be all that pretty, but there's no getting away from the fact that Sony's hi-def presentation of this classic comedy is as faithful to the source material as anyone could possibly hope for. Making the disc even more vital for fans is the inclusion of exclusive extras, such as outtakes and 'lost' animations.



069

The Fury

When this telepathic Brian de Palma thriller hit Blu-ray in the US it was limited to just 3,000 copies and was soon commanding high prices on eBay. This subsequent UK release put a stop to that by being widely available and boasting a new and improved restoration based on a 2K scan of the original 35mm negatives.



068

Saving Private Ryan: 2-Disc Special Edition

A firm favourite on DVD due to its aggressive DTS 5.1 soundtrack, Spielberg's World War II tale is even more immersive and powerful on Blu-ray courtesy of its reference-quality DTS-HD MA 5.1 mix. Just steer clear of the initial run of discs, which had an annoying audio sync issue.



067

Hugo 3D

Martin Scorsese uses cutting-edge 3D tech to celebrate the pioneers of early cinema in this fab family film. And as you'd expect from a filmmaker of Scorsese's stature, the use of stereoscopic imagery is especially impressive, making the outstanding quality of this disc's 3D picture quality all the more rewarding.



066

Man of Steel 3D

Marvel doesn't completely own the comic book movie landscape – DC Comics rival Superman returned to our cinemas last year with this big-budget reboot that moves seamlessly from dramatic origin story to all-out explosive action. The tightly-edited climatic fight scenes have immense scale in 3D, and the soundmix is simply supersonic.



065

Blade Runner: 30th Anniversary Ultimate Collector's Edition

No matter which edit of the sci-fi classic you prefer – *US Theatrical Cut*, *International Cut*, *Director's Cut*, *Final Cut* or the *Workprint* – this bumper box has you covered with Full HD versions of all five. It also comes packed with a model replica Spinner car and other collectible goodies!



064

Cinema Paradiso: 25th Anniversary Edition

Not content with serving up beautiful new restorations of both the original theatrical version and the longer Director's Cut, this Blu-ray also provides some truly informative bonus features. For fans of the award-winning Italian film, it's nothing less than a piece of home cinema paradise.



063

The Expendables 2

As the first Blu-ray release sporting an 'optimised for DTS Neo:X' soundtrack, this bullet-strewn sequel is an imperative purchase for anyone lucky enough to be running an 11-channel speaker array. It sounds BIG!



062

Django Unchained

The best-looking movie that Quentin Tarantino has yet delivered arrived on Blu-ray with a pixel-perfect 1080p transfer. The 2.40:1 image continually pops with vivid colours, and finds detail in the dim interiors.



061

The Long Goodbye

Another fantastic UK exclusive for a classic of American cinema. This hi-def platter of Robert Altman's revisionist film noir gets the best out of the deliberately desaturated visuals, while the in-depth extras add real value to the package. In other words, it would be a crime not to own this.



060

The Adventures of Tintin: The Secret of the Unicorn 3D

Blistering barnacles! If you're on the hunt for a thrilling mix of action, adventure, exceptional stereoscopic imagery and reference-quality DTS-HD MA 7.1 audio then you can't go far wrong with Steven Spielberg's computer-animated take on the Belgian comic book champion.





059

The Innocents

With its impeccable black-and-white AVC 2.35:1 1080p transfer, crystal-clear LPCM mono audio and informative extras, there's nothing scary about this Blu-ray – unless you count the film itself, which, despite being over 50 years old, remains one of the creepiest gothic horrors ever made.



058

Dredd 3D

This action-packed shoot'em up quickly banishes memories of the awful Stallone version from the mind with its stripped-down take on the legendary comic book lawman. Among all of the ultra-violent mayhem it also serves up some striking stereoscopic visuals, making it a must for anybody with a 3D setup.



057

Ratatouille

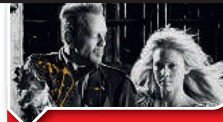
The first (but not the last) Pixar movie on this list, *Ratatouille* sees the 'toon studio at the top of its game, with beautifully animated characters that pack so much detail it sometimes beggars belief. The technically flawless transfer is partnered with a delightfully playful LPCM 5.1 mix.



056

Touch of Evil

Not only does this hi-def version of Orson Welles' hot and steamy film noir feature three versions of the film (1958 *Preview Cut*, 1958 *Theatrical Cut* and 1998 *Reconstruction*) it also takes into account the debates about the correct aspect ratio, giving you the choice to watch the latter two framed at both 1.37:1 and 1.85:1.



055

Sin City

With its pair of audio commentaries, numerous *Making of...* documentaries and picture-in-picture mode showcasing the original green-screen footage, this feature-packed Blu-ray edition of Robert Rodriguez's jaw-dropping graphic novel adaptation is essentially a film school in a box!



054

Big Trouble in Little China

Surprisingly few of John Carpenter's films are currently available on Blu-ray in the UK – but at least you can take comfort in having the definitive hi-def version of this cracking action-adventure flick. It looks and sounds every bit as good as the US disc, but also packs in an even more comprehensive set of extra features.



053

Gladiator: 2 Disc Special Edition [remastered]

If you bought the original hi-def release of Ridley Scott's sword 'n' sandals award-winner, bin it and replace it with this superior second outing that does away with heinous edge enhancement and detail-robbing DNR and leaves the movie finally looking as good as we all knew it could.



052

Rambo

Okay, we admit it: we didn't think a return to the mixed-up world of John Rambo would be this much fun. But writer/director/star Sylvester Stallone reached a new level of OTT action with this third sequel to *First Blood*, and the Blu-ray stands out for its remarkable, room-filling, floor-shaking 5.1 audio mix.



051

The Rocky Horror Picture Show

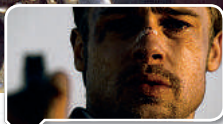
Fox's seductive hi-def treatment of the cult musical-horror-comedy lets fans do the time warp back to 1975 with the astonishing clarity, saturation and detail inherent in its lovingly remastered visuals. And we guarantee that songs like *Sweet Transvestite* never sounded as good back then as they do on the disc's lossless 7.1 mix.



050

Akira

No matter how many times you may have watched this legendary anime before, you've never experienced it like this before. The Blu-ray imagery looks fantastic, and it sounds like nothing else on Earth thanks to the inclusion of an ultra hi-res 192kHz/24bit Dolby TrueHD 7.1 remix of the original Japanese soundtrack.



049

Se7en

What's in the box? The only version of David Fincher's chilling crime masterpiece that comes anywhere close to recreating the look of the Color Contrast Enhancement (CCE) silver retention process, which was used in the creation of the initial batch of 2,500 first-run prints of the films that played in US cinemas.



048

Titanic 3D: Collector's Edition

We can count on one hand the number of successful stereoscopic conversions of older 2D movies that have been released on BD. So leave it to James Cameron, the new king of 3D cinema, to show how it can be done with his epic disaster film. This is the one 3D retcon that didn't leave us with that sinking feeling.



047

Beauty and the Beast: Diamond Edition

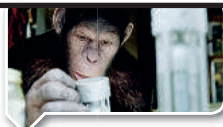
There's nothing even remotely beastly about Disney's treatment of this animated modern classic on Blu-ray. The AVC 1.78:1 1080p encode is a work of art, the DTS-HD MA 7.1 mix sounds sublime, and it comes accompanied by a wealth of extras including a 157-minute interactive documentary.



046

Singin' in the Rain

While we would have appreciated a few more bonus features (all the stuff that was included on the old Two-Disc Special Edition DVD for a start), the colour-rich 4K restoration of this sensationally smart and funny musical left us dancing for joy. And the 5.1 remix is superbly nuanced.



045

Rise of the Planet of the Apes

Startling visual effects are the order of the day here, with Andy Serkis's motion-captured performance as savvy chimp Caesar a breathtaking example of the state-of-the-art. Grab this BD to marvel at the CG eye-candy, and to revel in one of the best franchise reboots in years.



044

Dracula: 3 Disc Set

The best of all the bigscreen vampires gets a fresh injection of blood courtesy of this Blu-ray release. Beautifully restored and featuring footage cut by the UK censors but rediscovered in Japan, you'd be a fool not to want to take a bite out of Hammer's classic 1958 shocker.



043

Hot Fuzz

This hilarious homage to Hollywood action flicks (plus a few other movies to boot) is notable for the wealth of extra goodies on the HD disc. There are, for example, five chat tracks to check out, 22 deleted scenes, numerous featurettes, PiP storyboards, a trivia track, a 70 minute documentary about the press tour (!) and much, much more.



042

The Lion King 3D: Diamond Edition

We're used to being dazzled by Disney's treatment of its animated classics on Blu-ray. But even so, the outstanding quality of this 3D conversion of *The Lion King* had us roaring for more. It's just a pity the studio decided to make some of the old extras only available via a BD-Live link (and who uses that any more?).



041

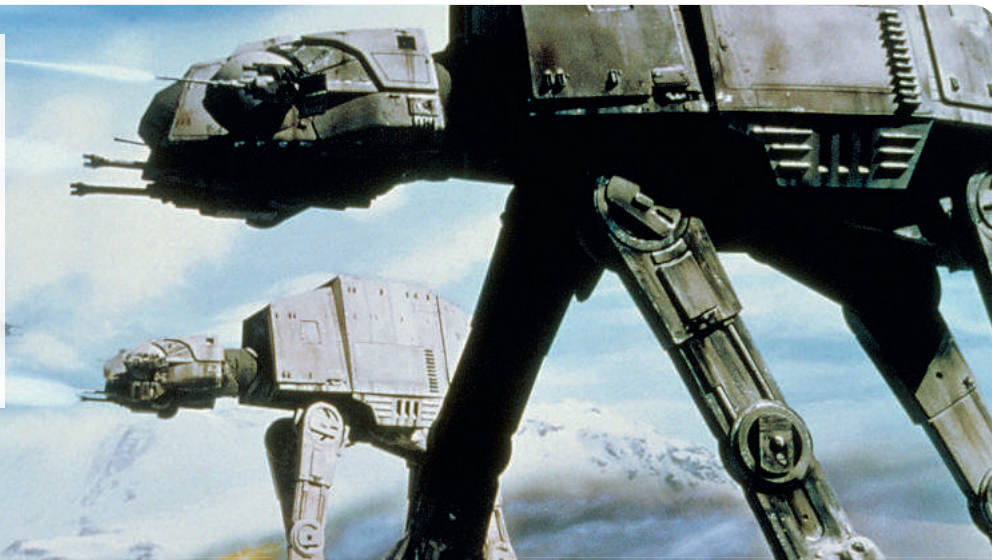
The Exorcist

Prior to 1998 it was impossible to believe that this celebrated horror classic would ever be available to own in the UK. Fast forward to 2010 and not only is *The Exorcist* out to buy on this side of the Atlantic, but fans can pick up a devilishly good-looking Blu-ray release hosting two cuts of the film and a legion of extras.

040

Star Wars: The Complete Saga

It's impossible to imagine a movie collection that doesn't include George Lucas's legendary sci-fi saga. While this nine-disc set flies a little short of perfection with some of its encodes and the baffling decision to leave out some extras that had already been released on DVD, it's safe to say that the Force is still strong in this one...



039

Blow Out

There's nothing like a good restoration to make you look at an old film with fresh eyes. Such is the case with Brian De Palma's underrated 1981 thriller, which looks more stylish and electrifying than we'd ever imagined it could.



038

Resident Evil: Afterlife 3D

Director Paul W.S. Anderson shows off his stereoscopic talents in this enjoyably daft zombieapocalypse sequel.

Slow-motion, water-soaked fist-fights have never looked so good!



037

Bond 50

Gadgets, guns and girls are in constant supply in this deluxe boxset containing feature-packed platters for the first 22 Bond films (several making their Blu-ray debut) and an exclusive bonus disc hosting even more extras. It's just a shame that a handful of the restorations show signs of excessive digital manipulation (most notably *GoldenEye*).



036

Fight Club: 10th Anniversary Edition

This Blu-ray release of David Fincher's oddly prescient satire will leave you battered and bruised by its insanely powerful DTS-HD MA 5.1 soundtrack. Indeed, so important is the film's acoustic design that the disc also contains an interactive extra with audio pro Ren Klyce that allows you to remix the sonics across four scenes.



035

Life of Pi 3D

When Ang Lee's award-winning film about a boy adrift on a lifeboat with only a tiger for company sailed onto Blu-ray last year it immediately set a new benchmark for 3D home cinema. Indeed, the level of visual artistry and spectacle on display means that this is certain to remain a key demo platter for the foreseeable future.



034

Moulin Rouge!

With its sparkling diamond of a DTS-HD Master Audio 5.1 mix and ridiculously opulent 1080p visuals, Baz Luhrmann's manic musical is now even more of a 'Spectacular Spectacular' than ever. A suitably lavish suite of extras (including a picture-in-picture mode) are also on hand to keep the party going.



Balanced on a knife-edge between social realism and existential horror, this disturbing, subversive portrayal of Australia's cultural underbelly failed to find a wide audience on its original release, but has since become established as a seminal cornerstone of the Australian cinema.

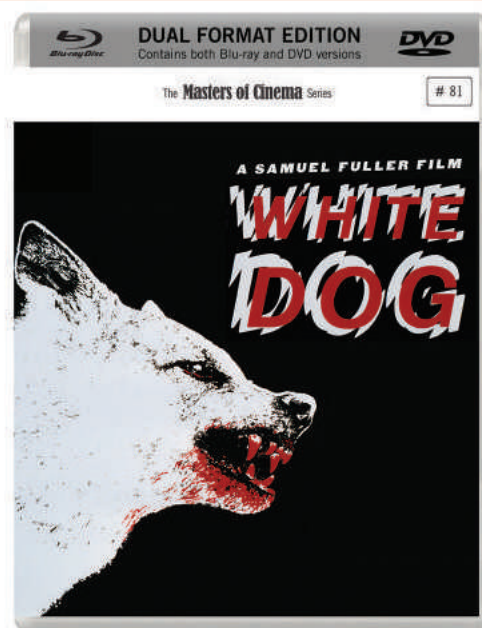
A middle-class schoolteacher, stuck in a government-enforced teaching post in an arid backwater, stops off in the mining town of Bundanyabba on his way home for the Christmas holidays. Discovering a local gambling craze that may grant him the financial independence to move back to Sydney for good, the opportunity proves irresistible. But the bad decisions are just beginning and a reliance on local standards of hospitality in "the Yabba" may take him on a path darker than ever expected.

**THE CULT AUSTRALIAN OUTBACK CLASSIC
ON BLU-RAY, DVD & ON DEMAND 31st MARCH 2014**

One of the most controversial American films of the 1980s, Samuel Fuller's *White Dog* was originally withheld from release in the USA and has been rarely seen since. This head-on examination of racism remains a riveting and startlingly powerful film experience, with superb performances and a brilliant score by the great Ennio Morricone.

When a young actress (Kristy McNichol) adopts a stray white Alsatian she hit with her car, she soon discovers that the dog has been conditioned to attack any black person on sight. Its only chance is Keys (Paul Winfield), an animal trainer focused on breaking the dog's behaviour and finding a way to eradicate its vicious instincts.

**SAM FULLER'S EXPOSÉ ON RACISM
ON BLU-RAY & DVD 31st MARCH 2014**



Winner of the Golden Lion at the Venice Film Festival, Francesco Rosi's *Le mani sulla città* [*Hands Over the City*] is one of the finest political dramas ever made – a ferocious, invigorating exploration of civic corruption in post-war Naples with the intensity of the best Hollywood thrillers.

Beginning with the collapse of an apartment building in a working-class district, the film zeroes in on the subsequent investigation of responsibility surrounding the disaster. At the centre is Edoardo Nottola (Rod Steiger), a wealthy land developer and council member of the government's ruling party, who is determined to keep his personal and professional interests in the building of new government housing as intertwined as possible.

**A MAJOR INFLUENCE ON COPPOLA'S THE GODFATHER
ON BLU-RAY, DVD & ON DEMAND 31st MARCH 2014**

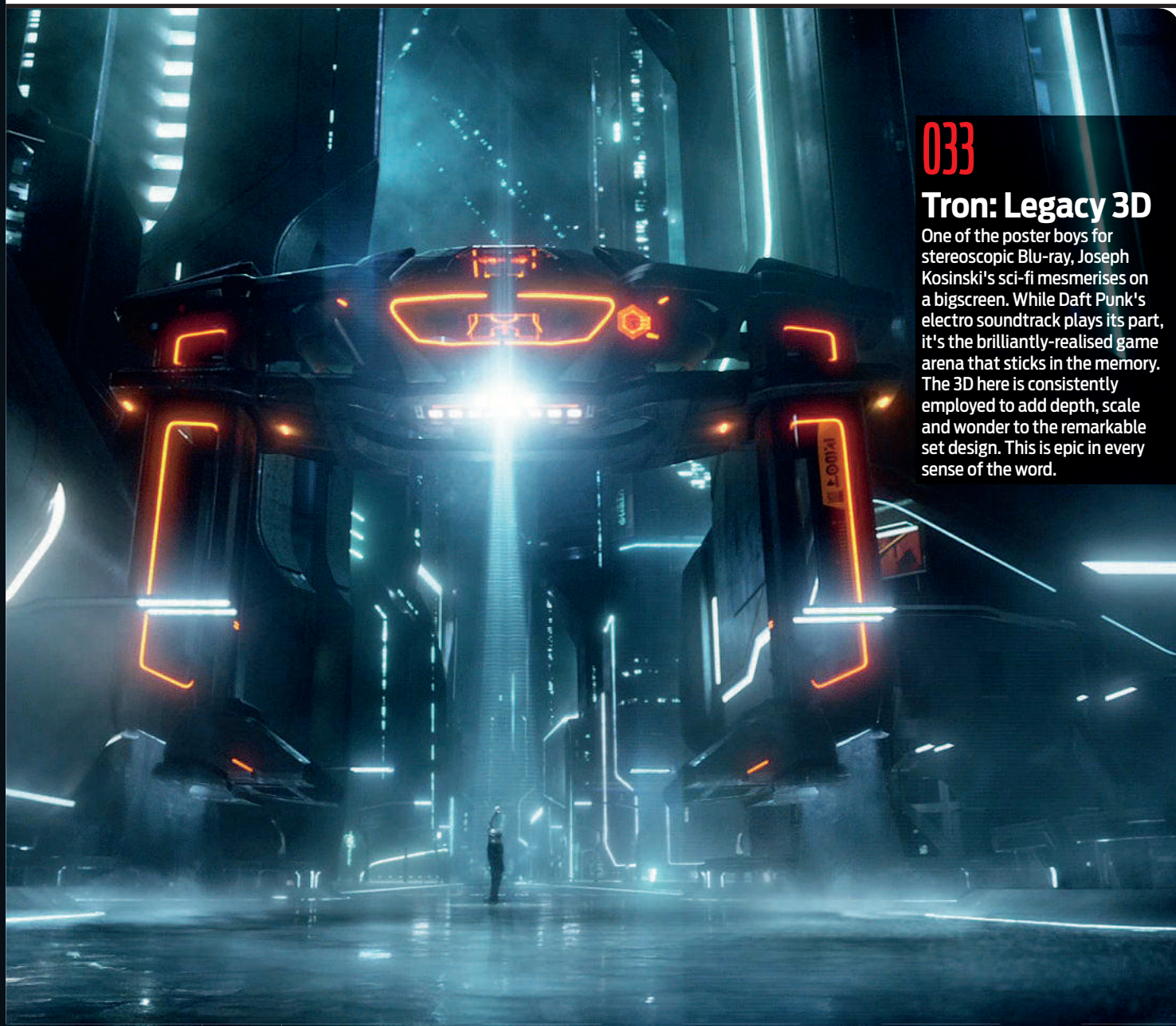


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033

Tron: Legacy 3D

One of the poster boys for stereoscopic Blu-ray, Joseph Kosinski's sci-fi mesmerises on a bigscreen. While Daft Punk's electro soundtrack plays its part, it's the brilliantly-realised game arena that sticks in the memory. The 3D here is consistently employed to add depth, scale and wonder to the remarkable set design. This is epic in every sense of the word.



032

Cloverfield

This superior creature feature goes to show that so-called 'found footage' films don't have to be resolutely lo-fi in their AV aspirations. Befitting a film about a massive monster rampaging through New York, the Blu-ray's lossless Dolby TrueHD 5.1 mix is an absolute beast, transporting you into the heart of the ruined cityscape.



031

Oz the Great and Powerful 3D

Another electrifying 3D showcase, with director Sam Raimi proving that the funny spex tech is tailor-made for fantasy escapades. Disney's 2.40:1 transfer is a riot of vivid colours, tactile textures and, above all, sheer immersion. The soundmix, which grows more expansive when we arrive in Oz, is no slouch either...



030

The Wicker Man: The Final Cut

StudioCanal answered our prayers with this deluxe edition of the legendary British horror flick. In addition to immaculate hi-def restorations of both the new *Final Cut* and the original *Theatrical Cut*, it also includes a standard-def version of the *Director's Cut* and a cornucopia of bonus goodies – including the soundtrack CD!



029

Sunrise

The Masters of Cinema Blu-ray collection may have swelled to more than 80 titles in the past six years, but it's this early addition that stands proudest of all. The first silent film ever released on the format, *Sunrise* proved without a shadow of a doubt that any film, no matter how old, could be made to shine in high-definition.



028

Hellboy II: The Golden Army – 2-Disc Special Edition

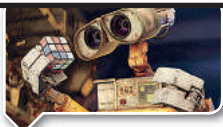
The awe-inspiring Blu-ray platter for Guillermo del Toro's fantastic comic book sequel packs as large as punch as the film's stone-handed hero, thanks in large part to the disc's ferociously impactful and always engrossing DTS-HD Master Audio 7.1 mix.



027

The Hobbit: An Unexpected Journey 3D – Extended Edition

Peter Jackson's return to Middle-earth was always going to deliver some show-stopping visuals, but this five-disc release adds exhaustive bonus bits (nine hours' worth!) as well as a longer edit of the movie. The LFE channel seems weightier, too.



026

Wall-E

Heartwarming, witty and packed with thrilling set-pieces, this tale of a lonely droid is made even better by Ben Burtt's painstaking audio work. This oozes deliciously tactile Foley effects and impressive LFE, while Thomas Newman's original score practically sings from your speakers. There's a great selection of extras here, too.



025

Despicable Me 3D

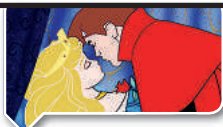
Arguably the closest any studio has come yet to stealing Pixar's thunder, this riotously funny and supremely inventive CG 'toon is also a terrific flag-waver for 3D Blu-ray. Depth and dimensionality are perfectly rendered and put to brilliant effect throughout. And your junior cinema fans will love it, too.



024

Ben-Hur: 3-Disc Ultimate Edition

A classic flick like this deserves the very best transfer possible, and Warner's restoration work (where it returned to the original negatives and polished them frame-by-frame) provides exactly that. Presented in the correct ultra-wide 2.76:1 aspect ratio, this BD delivers unbeatable cinematic spectacle.



023

Sleeping Beauty: Platinum Edition

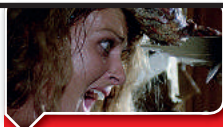
The first of Disney's hand-drawn animated classics to be released on Blu-ray remains the pinnacle of the company's hi-def output. Released to celebrate the film's 50th anniversary, this disc looks and sounds utterly sensational courtesy of a pristine 2.55:1 encode and newly-created 7.1-channel soundtrack.



022

The Wizard of Oz: Sing-Along Edition

Warner Home Video celebrated the 70th anniversary of the legendary 1939 musical with this magical Blu-ray release. Across two hi-def platters fans can savour a gorgeous remaster of the movie with lossless 5.1 audio and a profusion of extras – including six earlier Oz adaptations.



021

Zombie Flesh-Eaters

A former victim of the 'Video Nasties' furore on these shores, this Italian splatter movie finally got the chance in 2012 to show off its true colours on Blu-ray. Restored at 2K from the original Techniscope negative, Arrow's hi-def platter reveals the artistry of the film as well as the eyeball-gouging horror.



020

The Lord of the Rings: The Motion Picture Trilogy – Extended Edition

While *Fellowship...*'s revised colour-grading upset some fans, as far as we're concerned the otherwise top-tier AV and plethora of extras make this the definitive edition of the fantasy saga.



019

The Dark Knight Trilogy: Ultimate Collector's Edition

Holy Bat-box! Christopher Nolan's superhero films serve as the cornerstone of many a great Blu-ray collection – but to get the very best out of them you need this limited edition set that pairs the three existing Blu-ray releases with a bonus disc of documentaries, eight art cards and Hot Wheels models of the The Bat, Tumbler and Batpod.



018

Zero Dark Thirty

Kathryn Bigelow courted controversy and divided opinion with this re-telling of the hunt for Osama bin Laden. But the one thing that everybody who encounters it on Blu-ray does agree on is its astonishing AV credentials, with the dynamic and detailed DTS-HD MA 5.1 mix standing as one of the best multichannel mixes around.



017

Taxi Driver: 35th Anniversary Edition

Another entry for the picture quality perfectionists at Sony Colorworks, this HD outing (based on a 4K scan) for Scorsese's gritty thriller corrects some of the cropping errors from its DVD iteration and, importantly, leaves its natural film grain unmolested.



016

Kung Fu Panda

A disc for fans of multichannel mastery – *Kung Fu Panda* (and its sequel, actually) should always be on hand when you want to check your speaker system is ticking over nicely. Key to the Dolby TrueHD 5.1 mix is its gorgeously deep, tight and rich LFE, married to 360-degree effects placement. And it doesn't look too shabby on BD...



015

The Texas Chainsaw Massacre 2

Leave it to Arrow Video to take Tobe Hooper's second-tier horror flick and transform it into a must-own Blu-ray. In AV terms there's no real improvement on MGM's US release, but this set carves through the competition with an array of exclusive extras, including HD versions of two early Hooper films.



014

Inception

Still baffled by Chris Nolan's brain-boggling 2010 blockbuster? Well, this fantastic Blu-ray release not only lets you watch it over and over again in an attempt to unravel its mysteries, but ensures that doing so is never less than thrilling thanks to its eye-popping VC-1 2.40:1 1080p imagery and relentless DTS-HD MA 5.1 sonics.



013

Apocalypse Now: Three Disc Collector's Edition

The best thing about this great-looking BD package may well be the *Hearts of Darkness Making of...* doc, which is imperative viewing for anyone with an interest in filmmaking. On top of that, StudioCanal's three-disc set houses both the original and 'Redux' versions of the movie.



012

Iron Man

The first and best of Marvel's superhero films still sets the gold-standard for comic book capers on Blu-ray. From the gorgeously glossy AVC 2.40:1 Full HD encode to the trouser-flapping dynamics of the Dolby TrueHD 5.1 soundtrack and the bonus hi-def platter loaded with in-depth goodies, is it any wonder that Marvel's heavy metal hero has become a favourite with AV-holics everywhere?



011

Metropolis

Cinema's first sci-fi blockbuster managed to wow us all over again when it landed on Blu-ray in 2010. Even those intimately familiar with the film were forced to sit up and take notice of the disc's brand-new cut of the film, restoring around 25 minutes of previously lost footage that was rediscovered in Buenos Aires in 2008.



010

Avatar: Limited 3D Edition

We've run out of things to say about James Cameron's long-awaited sci-fi smash. Basically, if you have a 3D display, you just have to get this disc.



009

Fast & Furious 5

This car-packed, gun-heavy, muscle-bound action sequel is the best of the franchise, and director Justin Lin's stylised cinematography shines through on Universal's flawless BD release. In terms of audio, the DTS-HD MA 5.1 track nails the roaring engines and rapid gunfire – the bank heist finale is pure demo fodder.



008

Indiana Jones: The Complete Adventures

Two great films, one very good one and one that's, erm, a bit disappointing, all delivered with audio-visual panache and a (whip)cracking selection of bonus goodies – including some archival material that had never been released before. Oh, and...*Temple of Doom* is now uncut.



007

Star Trek

Not content with simply re-imagining one of the world's largest science-fiction franchises, this 2009 *Star Trek* reboot redefined what your home cinema setup was capable of with its accomplished 1080p visuals and emotionally involving lossless 5.1 track. Set faces to stunned!



006

Toy Story 3

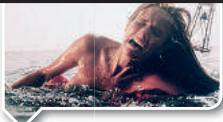
Anyone who says that sequels are inherently inferior to original films has never watched Pixar's *Toy Story* series. The best film in the series, *Toy Story 3* was also the first movie ever to be completely mixed in Dolby's Surround 7.1 cinema audio format – so it's hardly surprising to learn that the BD's DTS-HD MA 7.1 mix is a real corker.



005

**Prometheus:
3-Disc Collector's
Edition**

Say what you will about Ridley Scott's long-awaited *Alien* prequel, but there's no denying the brilliance of this Blu-ray. Both 2D and 3D encodes are among the very best, the DTS-HD MA 7.1 audio is sensational and the set's multitude of special features are, well, really special.



004

Jaws

Spielberg has never bettered this 1977 thriller and the delay in bringing it to BD most likely stemmed from his involvement in the restoration process. Hi-def *Jaws* was worth waiting for, though: the digital image is as sharp as the killer shark's teeth, while retaining a filmic feel. Choose between 7.1 or 2.0 soundmixes, sit back, and enjoy.



003

Skyfall

One of the most enjoyable Bond movies – and certainly the best-looking. Sam Mendes' skillful direction and show-stopping set-pieces are done full justice by Fox/MGM's mindblowing digital-to-digital 2.40:1 encode, which is full of inky blacks, immaculate detail and natural, finessed colours.



002

**Lawrence of Arabia:
50th Anniversary Edition**

Sourced from a newly commissioned 8K scan/4K intermediate, this celebratory Blu-ray edition of David Lean's golden oldie one of the most incredible restorations you will ever see. A perfect hi-def release for a perfect film.

Disagree with our Top 101?
Email letters@homecinemachoice.com
and let us know what we've missed out...



001

Alien Anthology

Was this ever in doubt for the number 1 spot? Fox's multi-disc boxset release for cinema's greatest sci-fi/horror saga is an example to all studios of how to handle their crown jewels. The transfers are simply stunning (particularly *Aliens*' James Cameron-approved colour-corrected remaster), the DTS-HD surround mixes are intensely atmospheric and the BD platters are bursting with fascinating supplementary material. Mount this package on a pedestal in your cinema room – it truly deserves it.

Home cinema

Which sort of visual system do you go for? Projector and screen, or plasma, LCD or LED TV? 3D or non-3D?

Choosing a home cinema system is a potential minefield that must be negotiated with great care or safely avoided by letting experts guide you. If you want to end up with a system that, as a minimum, meets your expectations in terms of picture and sound quality, reading magazine product reviews and choosing the recommendations, five-star favourites or best buys can only ever be part of the answer at best. Looking for the cheapest price and having a system delivered to your door, even with a 'knowledgeable' friend to help set it up, is a well-trodden path to disappointment.

There is a bewildering choice of components on the market today and also different ways in which components can be installed and connected together. Which sort of visual system do you go for? Projector and screen, or plasma, LCD or LED TV? 3D or non-3D? Full 1080p capability is now the only sensible choice but the appropriate source components, such as a Blu-ray player, need to be part of the equation.

The sound performance of a system is also hugely important, even more so if you will be listening to music, or music DVD's, through the same system. If so, you need an amp that approaches the performance

of a decent 2-channel hi-fi amp, which is not that easy to find. Having an amp with the right inputs for the best connectivity is essential but you will also need to decide on a 5.1 or 7.1 speaker system, passive or active sub and, crucially, where they will be sited for the best results. In short, it's complicated and very fertile ground for getting it wrong.

Achieving potential

To select a system, you could choose a collection of 'Best Buy' components in the hope that they will be a great combination. Maybe, but probably not. You could buy a pre-packaged all-in-one system from one manufacturer. This is almost certainly not the best route either, as you will miss out on enormous potential. From informal surveys conducted, it appears highly likely that the majority of home cinema systems

selected and installed on a DIY basis (that is without professional input) are performing at way below their optimum level. To compound matters, most are also ill-matched to the room in which they are installed and are, in reality, the wrong system. Without considerable knowledge or experience, high quality home cinema is not a suitable DIY activity. Our aim must be to buy a home cinema system that will provide an excellent picture quality plus an audio delivery that will match, or even better, the commercial cinema experience. It must be exciting, reliable and deliver true value for money.

“ Home cinema
so good you'll believe
you're there! ”



Selecting and installing home cinema on a DIY basis may leave the system performing at way below its optimum level.

Confused ?

What and Where to buy

To ensure a home cinema system is right for you, where do you start? Here's an important tip ...don't start with WHAT, start with WHERE. There's only one way to give yourself the best chance of getting it right first time, and that's through a specialist AV dealer. It's possible you have preconceived ideas that put you off visiting one. Although you would welcome the advice and guidance, you don't know the technical jargon. You don't want to be talked down to. Your friend has said they only sell expensive gear and they're not interested if you don't have a big budget. They're expensive. These are just myths.

Most specialist AV dealers are running their business because, above all, home cinema is their hobby. They spend a large portion of their time comparing systems to get the best possible results. They know the component combinations which don't gel together and, conversely, they know the combinations which give the best performance within a given price range. Very importantly, they know how to get a system working to its optimum. But they all also know the system must suit you.

Buying or being sold to

There are dealers around, web based or otherwise, who will sell you anything you are willing to pay for. They may be a bit cheaper but that's all they offer. Now there's a carefully selected group of long-established specialist dealers who are totally committed to putting the customer first. Their idea of 'selling' is to discuss your requirements, offer their advice, give you the best options, then play the systems for you and allow you to be the judge. You'll probably be surprised and, almost certainly, relieved to discover how easy it is to see and hear the differences between components and between systems. You'll be able to make a clear and informed decision about what to buy.

The story doesn't end there. These shops won't abandon you once you've put your hand in your pocket. They won't leave you to set up the system you've selected as best you can. They'll install it in your home, make sure it performs to its best, and ensure you're entirely happy with the way it works. Why? Because a high proportion of these dealers' custom comes through people who have bought from them before, either directly or by recommendation. It's vital to them to get it right for you.

Getting the best deal

Unless you've got money to burn, you'll be living with your new system for years. Most of these dealers offer much longer equipment guarantees than provided by the manufacturer, a very worthwhile benefit, but it also makes it in the dealer's interest to ensure high build quality and reliability. Maybe you could save a few pounds by buying piecemeal but you'll lose out on the overall package. As far as the dealers are concerned, they believe that taking care of their customers properly is a far better way of doing business than just handing over boxes.



The Dealers listed below have been selected because they are known to do an excellent job in guiding customers towards home cinema systems that will provide years of superlative performance and total satisfaction.

Our Top20 AV shops in the country

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Chelmsford

RAYLEIGH HI-FI SOUND & VISION

216 Moulsham Street.
01245 265245
www.rayleighhifi.com

Maidenhead

AUDIO VENUE

36 Queen Street.
01628 633995
www.audiovenue.com

Norwich

MARTINS HI-FI

85-91 Ber Street.
01603 627134
www.martinhifi.co.uk

Rayleigh, Essex

RAYLEIGH HI-FI SOUND & VISION

44a High Street.
01268 779762

CUSTOM INSTALL DEPT.

01268 776932
www.rayleighhifi.com

Southend-on-Sea

RAYLEIGH HI-FI SOUND & VISION

132/4 London Road.
01702 435255
www.rayleighhifi.com

LONDON

Ealing

AUDIO VENUE

27 Bond Street.
020 8567 8703
www.audiovenue.com

N1 GRAHAMS HI-FI

190a New North Road.
020 7226 5500
www.grahams.co.uk

SW11 ORANGES & LEMONS

61-63 Webbs Road, Battersea.
020 7924 2040
www.oandlhifi.co.uk

MIDLANDS

Coventry

FRANK HARVEY HI-FI EXCELLENCE

163 Spon Street.
024 7652 5200
www.frankharvey.co.uk

Nottingham

CASTLE SOUND & VISION

48/50 Maid Marian Way.
0115 9584404
www.castlesoundvision.com

NORTH

York

SOUND ORGANISATION

2 Gillygate.
01904 627108
www.soundorg.co.uk



The majority of the above dealers are members of one or both of the major trade organisations, BADA or CEDIA.

www.top20uk.info



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VERDICT ★★★★★

...Talk to the experts

A cinema of style and substance

ROOM CHECKLIST

DIGITAL PROJECTION:

M-VisionCine 3D Full HD projector

IMAGE IMASQUE: Four-metre 2.35:1 acoustically transparent masking screen

LUMAGEN: Radiance scaler

PANAMORPH: FVX200 anamorphic lens

ADA: ADA-Suite 7.1 HD processor

PRO AUDIO TECHNOLOGY:

1 x PMA-4242 power amp; 1 x

PMA-9942 power amp; 1 x

PMA-2222 power amp; 3 x

SCR-12sm speakers; 4 x

SCRS-6iw speakers; 2 x

LFC-15sm subwoofers

OPPO: BDP-93EU Blu-ray player

CONTROL4: 1 x HC800 system

controller; 2 x SR250 remote

controls; 1 x 7in Infinity portable

touchscreen with intercom/

camera

CINEMATECH: 8 x Le Grande

Valentino recliners; ARS room

acoustic solution



This bespoke movie room oozes cool but, as **Mark Craven** discovers, it also packs a serious AV punch

BATTLE STATIONS

Does the *White House Down* BD deliver AV thrills? p100

The sleek-looking kit rack won 'Most Professional AV Rack' at the recent Control 4 ISE awards

The 4m projector screen hides the L/C/R speaker array

THIS EIGHT-SEATER CINEMA scooped a Highly Commended accolade at last year's CEDIA awards in the Best Home Cinema over £100,000 category, with the CEDIA judges (including our very own Steve May) describing it as 'equivalent in standard and style to a London film preview room.' That's certainly something to aim for when contemplating a dedicated theatre, so we've dug a little deeper into finding out what makes this room tick.

Distinctly discreet

The project was undertaken by Midlands company The Big Picture, with the owner demanding a 'cutting-edge' cinema to match the modern-day tech of his new-build property. The installer was naturally responsible for AV, but also the interior décor, and the way both are mixed together is impressive.

The room's styling is described as 'understated but elegant'. All the walls are empty – there's no poster art here – and the grey colour scheme invites you to ignore it and focus on the giant four-metre Image iMasque projector screen. Perhaps the only flair touches are the runs of LED strip lighting along the bottom walls and in the ceiling installation, which serve to catch the eye and ensure you don't tumble down the stairs in the dark. ➤





The spacious cinema has room for eight recliners and stairs on either side

Yet beneath the surface, there's some acoustic cunning going on. The initial preparation stage included construction of stud walls to shape the space and deliver the best possible sonic performance – both inside and outside. A double layer of insulating plasterboard, comprising Kingspan and Celotex, provides heavyweight sound isolation so those in external rooms aren't affected. On top of this, the entire room is fitted with specialist acoustic treatments from US experts CinemaTech (which also provided the seating), including absorbent, reflective and diffusive panels. These are all then hidden from view by an 'acoustically translucent' stretched fabric system.

Work at the business end of the room is even more complex. In order to eliminate resonances, the space in what would become the screen wall void was packed with open cell foam. 'This involved measuring dimensions of space between speakers and walls, ceiling and floors and between each stud,' reveals the installer. 'Every inch was packed apart from the speakers' locations and a tiny gap around them.'

The speakers in question are all from Pro Audio Technology, a specialist custom theatre brand that you're unlikely to find on the high street. The cinema comprises a 7.2-channel array. The front soundstage uses a trio of the brand's SCR12sm models,

Both speakers and amplification are delivered by US brand Pro Audio Technology



each totting a 12in bass driver and a horn-mounted 1in compression driver. The surround channels are handled by smaller SCRS-6iw (in-wall) speakers. Multichannel amplification comes from Pro Audio Technology, too, as the company's loudspeakers are designed and tuned to perform best in conjunction with its range of power pushers.

Processing is via an ADA Suite 7.1 HD, which provides eight-in, two-out HDMI switching and a slender rackable form factor.

Getting the perfect picture

On the visual side, the aforementioned projector screen features motorised masking, enabling easy switching between aspect ratios, and this works in conjunction with a Lumagen scaler and Panamorph anamorphic lens for 'constant height' viewing. The maximum brightness and resolution of the Digital Projection M-Vision Series Cine 3D projector is therefore always utilised.

The AV and scene-setting lighting in the room is controlled by a Control4 setup. A portable touchscreen with built-in camera and intercom allows anyone in the cinema to see and talk to other people in various locations around the house – a key feature, as the property is vast and you'd scream yourself hoarse trying to get their attention otherwise.

Not that we'd imagine spending much time in the rest of the building when there's this cinema room to play with... ■

The cinema's lighting rig is managed via both on-wall and remote controllers



Serious Home Cinema



demands some Serious AV Separates



Pioneer
BDP-160
Blu-ray Player
and SC LX57
AV Receiver



If you're serious about your Home Entertainment, make sure you consult a dealer who really understands the latest products, who can demonstrate equipment properly and help you select what's right for your home and budget, whether it's big or small.

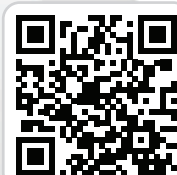
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REVIEWS

→ **HARDWARE HIGHLIGHTS** JVC £5,000 cinema projector **ANTHEM** Seven-channel AVR **SLING MEDIA** Slingbox 350 'placeshifter' **LG** 55in Curved OLED TV & LAP340 soundbase TV speaker **EPSON** Mid-range Full HD LCD projector **Q ACOUSTICS** Living room-friendly sub/sat system **SAMSUNG** All-in-one cinema system **ROUNDUP** Four over-the-ear headphones go head-to-head **AND MORE!**



Max power!

This multichannel array from Kreisel Sound promises serious sonics. See if it delivers on p50

HCC RATINGS KEY...	
Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

46 JVC DLA-X500R → Approx £5,000

AV INFO

PRODUCT:

3D D-ILA projector with third-gen e-shift '4K' tech

POSITION:

In the middle of JVC's latest projector range

PEERS:

Sony VPL-VW500ES;
Epson TW9200W



Top of the £5,000 projector class...

Despite frazzling **John Archer**'s brain with its quirky 4K claims, JVC's DLA-X500R is one heck of a home cinema projector

JVC continues to make 4K mischief

THE 4K WORLD is confusing for punters. Is it 4K or UHD? Do you need an HDMI 2.0 socket for proper 4K playback? Is 'true' 4K 4,096 x 2,160 or 3,840 x 2,160? What compression/coding format will 4K media use? And so it goes. Frankly, the last thing the burgeoning 4K world needs is a projector that can take in 4K content, uses a technology called e-shift 4K but isn't actually a 4K projector. Except that in some ways it sort of is.

In other words, I'm not currently feeling at all happy with JVC for causing my already overloaded AV brain to veer even closer to implosion with the latest angles on the 4K 'situation' suggested by its new DLA-X500R projector. Hopefully its performance will be good enough to see off my impending headache and put a movie-loving smile back on my face.

The DLA-X500R is an attractive thing – so long as you share my view that 'serious' and 'meaty' add up to attractiveness when you're talking about quality AV gear. Available in matt white or black, its large, squarish footprint, striking vent 'wings' down each side and large centrally-mounted lens all suggest a projector that's out to take no prisoners – an impression underlined by its substantial heft.

The sense of a quality build is enhanced still further by the fact that the lens is adjusted completely mechanically, with the remote providing access to brilliantly extensive focus, image shift and optical zoom adjustments.

Connections are up to snuff too, including two HDMI, a 12V trigger port, and both Ethernet and RS-232C options for adding the projector to a wider home control network. There's also a little circular port where you need to plug the provided 3D transmitter 'dongle' if you intend to take advantage of the DLA-X500R's 3D capabilities.

Without further ado let's get some clarity on the truth behind the DLA-X500R's '4K' claims. The single most important point is

that it doesn't actually employ any native 4K-resolution D-ILA projection chipsets. So it can't output a genuine, pixel-for-pixel native 4K picture. Even when it receives a native 4K source (which it can do), it has to downgrade it to 1080p before its optical system can work on it.

However, what it does do that rivals at its £5,000 price level do not, is use JVC's e-shift 3 technology to output a signal with four times as much pixel density. How? By running images through two imaging devices offset diagonally from each other by half a pixel. This ends up producing the '4K' pixel count JVC is so keen to talk about, while processing goes over every frame of the image to try and figure out how best to apply the extra pixels now available.

Last year this processing worked on clusters of pixels over eight frequency bands; this year, the processing is powerful enough to look at every single pixel of every single frame when working out how best to apply the '4K effect'. I'll look at what difference this makes later.

Tweaker's paradise

Despite there being two higher-end models in JVC's lineup for 2014, the DLA-X500R still comes equipped with an expansive picture calibration system. Among the sort of pro-installation-friendly tools on offer are adjustments for gamma (combining preset values and manual control over the gamma curve), colour profile, colour temperature

(including a 6,500K setting), colour tint and, of course, the usual brightness, contrast and 'universal' colour elements.

There's also plenty of control over the e-shift system via the rather obscurely labelled MPC menu. Here you can simply toggle 4K e-shift on and off, or else tweak the levels of its sharpness, dynamic contrast, smoothing and noise reduction (NR) elements.

Being able to massage these parts of the e-shift system proves very welcome, as I found images to look much more immersive and effective if I moved the NR element down to just 1 and nudged the Enhancement setting down to around its 35 level from its 50 default. You don't have to follow my lead here, though; the key point is that the flexibility is there to make e-shifted images appear how you personally want them to, especially when it comes to the extra sense of sharpness that they deliver.

Two further adjustments available in the DLA-X500R's reasonably clean menus are rather less useful. The first is JVC's Clear Motion Drive – a frame interpolation system for tackling D-ILA's tendency to cause resolution loss when displaying motion. This system has, to be fair, improved greatly since its earliest iterations, but it still generates a few more unwanted processing side effects than I'm comfortable with. Most of the time I left it off.

The dynamic iris system, meanwhile, feels more like >



JVC's handset is backlit and easy to use

something JVC has added in frustration at the outlandish contrast ratio figures quoted by rival projectors, as opposed to something that necessarily improves picture quality by any great deal. While the dynamic iris addition allows JVC to claim a vast contrast ratio of 600,000:1 for the DLA-X500R, its native ratio (as in, totally stable, with no light 'manipulation') of 60,000:1 remains by far its most important spec. With the dynamic iris left off the DLA-X500R still delivers stunning, class-leading black levels for its price point

'4K e-shift is a feature that I have no problem leaving on – it gives images a greater sense of density than HD'

while retaining a more consistent and thus immersive light level than you get with the dynamic iris on.

There is slightly more punch to the DLA-X500R's images with the dynamic iris in play, but personally I'd trade some of that for increased consistency every time.

Image manipulation

Now that I've stumbled into talking about the DLA-X500R's performance, I'll get stuck into my impressions of the DLA-X500R's all-important 4K e-shift shenanigans.

Basically there are two sides to the e-shift coin. On the tails side, e-shifted pictures do not look like genuine native 4K pictures. They don't have the same level of detail, precision and clarity – even when you feed in a native 4K source.

However, while e-shift 4K doesn't deliver a picture to rival a native 4K one, it does frequently improve on the look of normal Full HD footage. There's clearly – especially on very large screens of 100in and more – a greater sense of pixel density when watching Blu-rays. This gives the image a finish more like traditional celluloid or 4K digital cinema than a normal 1080p projection chip could.

In other words, it's a feature that I have no problem leaving on. The lovely cinematic finish bestowed upon the image pretty much eradicates all traces of visible pixel structure or jagged edges, and it's great to see that JVC's improved e-shift 3 engine delivers the extra pixel density on a more subtle, localised basis than it has previously, virtually removing the tendency to generate unwanted pixel noise in some areas.

A great example of this can be seen in the early *Casino Royale* sequence where James Bond attempts to drag a suspect he's chased down out of an embassy. The final section in the backyard is an oddly grainy sequence on



The DLA-X500R offers fully motorised control over its 2x zoom lens

the Blu-ray, and previously this has caused e-shift to leave some parts of the picture looking excessively noisy. With the latest iteration of JVC's tech, the engine spots 'problem' areas and handles them more gently, resulting in a noticeably more even image.

Black velvet

I mentioned earlier how the DLA-X500R can deliver a class-leading black level response in terms of both its depth and its stability. I should add that the DLA-X500R's native contrast performance is so good the projector can deliver exceptional levels of shadow detail in even the darkest images (such as the climax of *The Silence of the Lambs* in Buffalo Bill's blacked-out basement), avoiding the hollow look sometimes seen with projectors that call on dynamic irises for their black talents.

Excellent native black levels are usually a prerequisite to an impressive colour





Connections and basic controls are mounted on the rear

performance, something certainly true of JVC's mid-range model. Its rich, grey-free black foundation leads to a colour range of rare expansiveness, subtlety and accuracy. The car and driver livery in *Rush*, for instance, looks consistently gorgeous. You do have to iron out slight tonal biases with a couple of the DLA-X500R's picture presets, but the tools are there to achieve this relatively straightforwardly.

If there's been one disappointing thing about JVC's recent projector output, it's 3D. D-ILA 3D has tended to lack brightness and suffer with rather aggressive crosstalk ghosting noise. It's a relief, therefore, to slip on one of the DLA-X500R's two pairs of free 3D glasses and find it tackles both these issues very successfully, leaving you with a pleasingly punchy, much sharper 3D picture than the brand has managed before.

Motion in 3D images can look a little indistinct, for want of a better word, but this is a relatively small complaint in the context of all the great stereoscopy on show. Indeed, 3D may have failed to take the TV world by storm, but it absolutely has a place in a projector-based home cinema, and those who buy JVC's new PJ should dig out their *Gravity* Blu-ray pronto.

Not quite whisper-quiet, but...

The DLA-X500R fares better with cooling fan noise than its predecessors. Or perhaps it would be more accurate to say that the improvements made to its optics meant that I didn't feel as much need to run the PJ on its highest (and noisiest) lamp output setting, as I have tended to before. Even with 3D.

In fact, aside from the potential confusion the DLA-X500R creates around its 4K capabilities, there's only one serious complaint I can raise against JVC's stellar new projector: input lag. My tests measured input lag in excess of 120ms, which is high enough to upset your console/PC gaming skills when you consider that figures of 30ms or less are really needed for an unimpeded gaming performance.

I know no review of a premium non-native 4K projector can finish without some discussion of whether such a projector is still worth buying. Certainly holding off for more native 4K projectors to appear – including, we hope, one from JVC in the not-too-distant future – could be advisable if you love high resolution and are really patient.

However, despite Sony's incredible feat in getting its VPL-VW500ES native 4K projector down to £8,500, I suspect it could be some time before 4K projectors of that level of quality plummet to the £5,000 price point of the JVC DLA-X500R. So if that's the sort of budget you're looking at, I'd say you should bag yourself a DLA-X500R immediately, since it's far and away the finest projector in its class ■

ON THE MENU

→ The X500R's overlaid menus are unglamorous but serve up everything you need to tweak its image in a sensible fashion. Unlike its higher-end stablemates, this PJ isn't ISF/THX certified, but still stocks plenty of calibration tools

SPECIFICATIONS

3D: Yes. Active
4K: No – 1,920 x 1,080, but does offer e-shift 3 4K up-res technology
CONNECTIONS: 2 x HDMI; Ethernet; RS-232; 12V trigger output; 3D transmitter jack
BRIGHTNESS (CLAIMED): 1,300 ANSI Lumens
CONTRAST (CLAIMED): 60,000:1 native, 600,000:1 dynamic
DIMENSIONS: 455(w) x 179(h) x 472(d)mm
WEIGHT: 14.7kg
FEATURES: D-ILA projector; e-shift 3 4K technology; Clear Motion Drive processing; dynamic iris option; built-in lens memory; motorized lens adjustment; high and low lamp modes; two pairs of 3D glasses and transmitter dongle included; 2D-3D converter; 4K signal input (up to 60fps, 4:2:0 colour base) seven-axis colour management system; +/- 80% vertical lens shift; +/- 34% horizontal lens shift; 2x zoom; 21dB fan noise (low lamp mode)

HCC VERDICT



JVC DLA-X500R

→ £5,000 Approx → www.jvc.co.uk
 → Tel: 0845 310 8000

HIGHS: Class-leading contrast performance; impressive 3D pictures; motorised lens with plenty of zoom; e-shift 3 works well with HD sources

LOWS: High input lag a problem for gaming; it's not a true 4K projector

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★

50 KREISEL SOUND QUATTRO SERIES → Approx £9,500

AV INFO

PRODUCT:
High-end 7.2 array
for dedicated rooms

POSITION:
Top of the Kreisel
Sound lineup

PEERS:
Procella Audio P10/
P8/P6;
Monitor Audio
Platinum PL200 AV;
B&W 800 Series



Adam Rayner gets to grips with a system that features no less than twenty-eight tweeters – and two insane subwoofers

Let's fire up the Quattro!

A SPEAKER DESIGNER of note tends to have an area they're best at, be it high-end tweeters, like Bowers & Wilkins' vapour-deposited Diamond contraptions, or heart-stopping bass drivers, like pretty much anything proffered by Velodyne or REL. Yet some excel in all areas – and their products deserve attention.

I was impressed recently by a set of Aurum speakers from Quadral that seemed to address all the frequencies in equal levels of engineering excellence, but that system was beyond twice the price of what we're reviewing here. This Quattro array from Kreisel Sound, the company helmed by Ken Kreisel (the K in the original M&K), is the latest and most advanced iteration of the man's very own take on speaker design. And it is probably unique in home audio. A system of absolute excellence that covers all your home cinema needs, from slicing highs of great accuracy to bass that makes you believe a Bugatti 'space car' has just crashed through your living room. More on that later.

This seven-channel array comprises mostly compact enclosures, plus two very large subwoofers, although the brand does suggest you consider a 7.4 system, or even bigger. Indeed, this product line was designed with the immersive hecticcy of 11-channel audio in mind, with dedicated 'height' speakers part of the catalogue.

It's got more drivers than Tiger Woods

Set up, the first thing you'll notice are the clusters of soft dome tweeters in each loudspeaker's front face, alongside one or two 5.25in paper cone drivers. The fronts in this package are the left- and right-delineated Quattro KK-Q125s. These can be used with optional £500 stands (as in our photography) designed to hold that amount of tweeter

energy, and they utilise two of those midbass drivers. The centre (Quattro KK-I25C) is essentially the same speaker but horizontal, and equipped with a shallow plate stand.

To the sides, we've used the Quattro KK-Q125 TriFX surrounds and for rears, the Quattro KK-Q85s (distributor L Sound sells the speakers separately, so you can build your own preferred array). The latter are an asymmetrical trapezoidal shape, designed to be wall-mounted above your listening position.

The TriFX cabinets feature a 3in driver on each flank, as well as the full complement of drivers (a 5.25in mid plus four tweeters) to the fore. Depending upon the jumper position, you can choose between the trademarked TriFX mode, which is a side radiation-plus-front output to give dipolar surround with focus as well; classic dipole mode with the front drivers silenced; or direct front mode with the side drivers silenced. However, I feel you would really buy these to make use of all their talents and thus stick with TriFX. I did.

It's worth stressing that the four-tweeter array is not just an ASBO-cluster to make it +12dB, or four times louder. Rather, the aim is to shape the high-frequency output, as well as the synergy of the four, and to cross them over lower down than a normal tweeter array to improve coherency. Each is given its own slightly different signal from the complex interior passive crossover system of capacitors, inductance coils and resistors. This ensures the most-perceived-detail zone of frequencies, the >

Which ever way you look at it, that's a lot of tweeters...



This system employs two of the DXD-1202 subs, mounted in a vertical stack and connected via XLR

highs most likely to bounce off walls and confuse the soundstage, are marshalled – the sound is aimed into the listening area, reducing energy arriving at a room's walls, increasing focus and perceived detail. It works, and is a pro-audio approach also shared by IMAX.

The subs, called DXD-1202, are prodigious and retail for £2,500-a-piece. Our two were bolted together with meaty fixings and chunks of shapely steel, and four rubber coupling pads. Each has a side-firing 12in driver and another one mounted vertically, adding up to the cone area of one 18in woofer. Each gets a solid 375W RMS from its own Class D amp, to end up with 750W in total. In a stack of two (the 'duo' arrangement recommended by Kreisel Sound) their drivers are in two opposing pairs, since the second sub goes atop the first, on its head. The two connect via an XLR cord.

Sci-fi stunners

I spun up *Elysium* on Blu-ray. A grubby sci-fi, oddly with some swordplay thrown in, it begins on a dirty Earth where everything looks like a Brazilian favela. You can smell it, so good is the sound design and grimy cinematography. This array impressed immediately with its layered presentation. We see our protagonist as a child with his sweetheart, making promises about escaping to the Elysium habitat where the wealthy live, and the sound of children playing is overlaid by a close-miked voiceover. It is

complex and busy but the Kreisel Sound array delivers it all.

From there, the sci-fi vehicles soon arrive. Stumpy jet-equipped craft that look rusty and make a lot of big sounds, especially when they crash. At this point, my room shook hard but completely distortion-free. Missiles are deployed – the sound as the mechanism opens and ejects its load, and the weaponry fires its engines and zooms off, was superbly, absurdly, detailed. Moreover, it was tremendously coherent as they wove around the soundfield, and while the speakers were visibly there, the soundstage in the room didn't seem to be connected. The placement of the missiles was absolute.

Later, when our hero is at his job in a robot factory, the locational cues of the machinery around him proved utterly immersive. But the sheer impact of effects was also impressive. The click of a gun priming, and bullets exploding near a target to rip it all to shreds, cut hard but not so it became uncomfortable or ever broke up.

Bass is controlled, accurate and polite despite the power. When the villain's personal spacecraft is shot down – with an EB symbol on the bodywork and current Veyron livery of paint – my room again throbbed, and I positively felt the crunch of gravel beneath it.

Elysium's best sequence to show off the controlled dispersion and razor-sharp accuracy of this system's tweeters comes towards the end. The swoosh of a longsword being taken from its scabbard moves from the left front channel to the centre speaker, the camera moving with it. It takes supreme imaging to

'This array is startling – beautifully made and with immense scale, weight, detail and impact'

shape this and great attack to make it sound sharp – something that the Q125s tweeter clusters made light work of.

With immense scale and weight as well as detail and impact – plus serious dynamics – this array startles. But then, you do have a fantastic amount of bass power to use and plenty of HF drivers. It is beautifully made and eye-catching to behold, and Ken Kreisel has eschewed front-mounted tufts of foam to tame the highs (as seen on rival MK Sound's superb S-150s) and used the most clever passive tech yet seen in home theatre instead.

Yes, this setup is costly, but in truth it represents amazing value in sheer pro-grade output terms. And if you can hide the monster woofers in a corner, the rest of the package is surprisingly easy to accommodate ■

SPECIFICATIONS

KK-Q125 LC/RC

DRIVE UNITS: 2 x 5.25in paper pulp cone woofers with cast aluminium chassis; 4 x 1in proprietary soft fabric dome tweeters
ENCLOSURE: Two-way, sealed
FREQUENCY RESPONSE: 80Hz-25kHz
SENSITIVITY: N/A
POWER HANDLING: N/A
DIMENSIONS (MAX): 160(w) x 423(h) x 190(d)mm
WEIGHT: 7.6kg

KK-Q125C

DRIVE UNITS: 2 x 5.25in woofers; 4 x 1in tweeters
ENCLOSURE: Two-way, sealed
FREQUENCY RESPONSE: 80Hz-25kHz
SENSITIVITY: N/A
POWER HANDLING: N/A
DIMENSIONS (MAX): 423(w) x 160(h) x 190(d)mm
WEIGHT: 7.6kg

KK-Q125 TRIFX

DRIVE UNITS: 1 x 5.25in woofer; 4 x 1in tweeters; 2 x 3in side-firing drivers
ENCLOSURE: Three-way, sealed
FREQUENCY RESPONSE: 80Hz-25kHz
SENSITIVITY: N/A
POWER HANDLING: N/A
DIMENSIONS (MAX): 215(w) x 290(h) x 190(d)mm
WEIGHT: 6.5kg

KK-Q85

DRIVE UNITS: 1 x 5.25in woofer; 4 x 1in tweeters
ENCLOSURE: Two-way, sealed
FREQUENCY RESPONSE: 80Hz-25kHz
SENSITIVITY: N/A
POWER HANDLING: N/A
DIMENSIONS (MAX): 215(w) x 290(h) x 190(d)mm
WEIGHT: 6.5kg

DXD-1202 SUBWOOFER

DRIVE UNITS: 2 x 12in Push-Pull-Pulsar™ long-throw bass drivers
ENCLOSURE: Ported, 'Back-Sidefire' design (one driver is in the vertical plane, the other horizontal)
FREQUENCY RESPONSE: 10Hz-200Hz
ON BOARD POWER: Dual Class D high-current 375W RMS monoblock amps
DIMENSIONS: 492(w) x 602(h) x 390(d)mm
WEIGHT: 36.6kg
CONNECTIONS: Stereo phono input; XLR balanced input and passthrough

HCC VERDICT

Kreisel Sound Quattro Series 7.2

→ £9,500 Approx → www.lsound.eu

→ Tel: (+47) 377 11 333

HIGHS: Effortless sound with prodigious, controlled bass and incisive accurately-placed highs; impressive build quality; easy to build a tailored package

LOWS: Not an impulse buy; largescale subwoofers

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★



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Adrian Justins takes a break from media streaming to focus on the audio essentials with Anthem's MRX 510

The lean, mean cinema machine

IN AV MANUFACTURING terms Anthem is a relatively small outfit, and taking on the big AV receiver brands – Pioneer, Yamaha, Onkyo *et al* – at their own game would probably be commercial madness. This explains its MRX lineup of AVRs – multichannel power pushers that are just a little bit different to the mass market competition.

When Anthem launched the first MRX range three years ago the company was certainly taking a risk. Ignoring the peripheral features now commonplace on AVRs – such as AirPlay and Bluetooth wireless audio streaming, Spotify and network integration – is akin to a TV brand turning its nose up at BBC iPlayer. Yet, says Anthem, if you want those extras, you can buy an Apple TV, or something like an Arcam rLink. This is no flawed logic from the Canada-based company, given that the experience of streaming and networking on an AVR often falls short of that offered by many external devices. Instead of all those distractions, the company entices buyers with its Anthem Room Correction (ARC) feature, which ups the ante massively in the calibration stakes for a consumer AVR.

The new MRX line again comprises three models, with the entry-level 5.1 MRX 310 offering 60W per channel, the 7.1 MRX 510 reviewed here climbing to 75W per channel and the flagship MRX 710 hitting 90W.

The feature set is unusual as it's been stripped back somewhat from three years ago. The MRX 500 sported front height channels, but these have been jettisoned, apparently in response to customer demand. Consequently, you now have options for rear back channels, second-zone stereo or bi-amped fronts. iPod docking, internet radio and USB media playback have all been banished, too.

Connectivity includes a healthy count of eight HDMI inputs (one front-mounted), two HDMI outputs and 4K passthrough and

upscaling. Analogue and digital audio inputs abound but multichannel analogue audio inputs are given the cold shoulder, as is DSD compatibility over HDMI. Annoying for SACD enthusiasts such as myself but, I must begrudgingly admit, consistent with Anthem's mantra of sticking to core home cinema and musical formats.

The flip side to this reduced feature count is that ARC has been revamped and improved, and now runs on a network-connected Windows laptop rather than the ponderously slow RS232C conduit of before.

Cleanly styled

Another area which is greatly improved is the design of the AVR. The fascia is now cleaner with low-profile buttons and a symmetrical layout. The dot matrix display does exactly what you'd want it to. All in all, it's very nice.

The same sense of aesthetic satisfaction applies to the menu system. The GUI lacks fancy icons but comprises a logically laid out list of contents with a clear font and a neat red-and-white colour scheme. Everything is highly legible and easy to adjust using the remote. This lets the build quality side down by being hewn from woefully cheap-looking plastic but at least has large, backlit buttons. A dull but perfectly functional Android app offers a smartphone alternative, with an iOS app expected soon.

ARC aside, setup and installation are a walk in the park. Even if you're intending to use ARC you have to set speaker distances manually >

The stripped-down feature set results in an uncluttered handset





AV INFO

PRODUCT:
7.1-channel
AV receiver

POSITION:
Middle of the
three-strong
MRX range

PEERS:
Arcam AVR380;
Pioneer SC-LX76;
Onkyo TX-NR3010



The MRX 510 is supplied with a calibrated mic and tripod stand



(USB microphones invite latency issues), but that's a doddle and you can, of course, set levels and bass management manually, too.

Input settings are particularly impressive. You select the audio and video inputs for up to 20 sources, plus specify the speaker profile and options such as listening mode (eg. DPL IIx if required), lip sync and Dolby Volume. I saved two versions of each source as separate inputs, one with EQ and one without, for ease of comparison.

On to ARC then, which Anthem suggests is performed by the dealer who sells you the AVR, especially as there is no in-depth instruction manual. In my case Anthem's UK distributor showed up with a laptop to do the honours, using the metal mic and adjustable tripod. It's absolutely fascinating, and a little

'The Anthem's total authority means every element of the soundstage is perfectly optimised'

frightening, seeing the curves for each speaker, revealing any particular shortcomings in frequency response. Anthem claims that ARC is unique (for a non-pro room corrector) in that it 'listens' to the room before it sets high pass filters as required. It also says that if more than 5dB correction is needed it's best to reposition your speakers...

Ultimate control

You can choose to run the MRX 510 with ARC off, but why would you? That'd be like trying to drive down the Kirkstone Pass in neutral. Without braking. Put simply, the control it exerts when added is profound.

This was illustrated perfectly by the mother of all explosion scenes, the train crash in *Super 8*. As the boys inexplicably run along the side of the derailing train rather than away from it, the MRX 510 reveals greater detail in the whoosh of wreckage that pans across the

The 8-in, 2-out HDMI configuration should easily cover all your connection needs

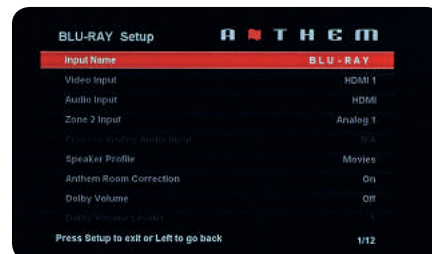
soundstage, thanks in no small part to its impressive control of the subwoofer. The whole cacophony is exquisitely well balanced, so that deep bassy explosions are delivered with the tightness and impact of a Tyson Fury sucker punch but individual effects, such as the phone bell ringing, train driver's whistle and film winding through the camera, aren't swamped by the thunderous rumble of the passing train. Brilliant.

ARC also proved its indispensability with *The Fantastic Four* in its handling of the crash on the Brooklyn Bridge after Ben Grimm has stopped a suicide attempt. Fine details, such as the pigeon's flight and its cooing, or the business man's grab of the power line all had a chunk more dynamism and impact with the EQ allowed to do its thing. Then when Grimm lands with a thud and shoulder barges the oncoming truck, causing an unholy pile up, the explosion rumbles menacingly across the room, practically shaking the dust from the light fittings. The beauty here is that the low-end impact feels immense but the Anthem's total authority means every element of the soundstage is perfectly optimised.

Equally impressive is the MRX 510's handling of less energetic but equally challenging material – *Arrested Development's* Dolby Digital 2.0 soundtrack on DVD, in this case. Dialogue that sounds compressed and lacking in life becomes more distinct, but not harsh or clipped. The often unintelligible mutterings of Gob and George Michael receive a much needed boost, sounding clearer and more sonorous. The amp is no less an authority with music, with its tonal neutrality and crystalline clarity serving Pink Floyd's *Dark Side of the Moon* (SACD) superbly.

Overall, it's impossible not to recommend the MRX 510 enough. For an AVR, sonic performance is of paramount importance, and the Anthem's full-bodied, tight and atmospheric aural delivery makes it an imperative purchase. It may lack some additional features, but you won't care ■

ON THE MENU



→ Anthem's UI is functional, rather than flash. Always legible and easy to navigate, you can spend time here specifying a range of parameters for each input and making manual sonic adjustments

SPECIFICATIONS

DOLBY TRUEHD: Yes. And Dolby Volume, DD+, DPL IIx Movie, DPL IIx Music

DTS-HD MASTER AUDIO: Yes. And DTS Neo:6, DTS-HD HR

THX: No

MULTICHANNEL INPUT: No

MULTICHANNEL OUTPUT (CLAIMED): 7 x 75W (8 ohms, 20Hz to 20kHz, 0.1% THD)

MULTIROOM: Yes. Two zones

AV INPUTS: 1 x composite; 5 x digital audio (3 x optical and 2 x coaxial)

HDMI: Yes. 8 x inputs; 2 x outputs (v1.4)

VIDEO UPSCALING: Yes. To 4K

COMPONENT VIDEO: Yes. 2 x inputs; 1 x output

DIMENSIONS: 439(w) x 372(d) x 164(h)mm

WEIGHT: 13.7kg

ALSO FEATURING: AM/FM tuner; Anthem Room Correction (ARC-2); infinite impulse response-based EQ software; setup mic and tripod; USB input (for software update only); separate switchable configuration for music and movies; AnthemLogic Cinema and Music listening modes; IR input; backlit remote control; bi-amplification front left/right; 4K passthrough; Apple iOS and Android control Apps; Ethernet (for ARC setup); 7.1 channel pre-out; 20 configurable inputs

HCC VERDICT



Anthem MRX 510

→ £1,700 Approx → www.anthemav.com

→ Tel: 01825 750858

HIGHS: ARC EQ is awesomely good; terrific sound quality; versatile input handling; clean styling

LOWS: Somewhat cheap remote; uninspired app control; ARC complex to set up; lack of DSD handling may annoy

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★

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TV, wherever you are

Sling Media's latest Slingbox can be used to stream your telly via the internet to computers, mobiles and more all around the world. **Grant Rennell** reacquaints himself with 'placeshifting'

SLING MEDIA'S SLINGBOXES are able to take video and audio from a connected source such as a TV receiver or DVD player and distribute it for viewing on numerous devices. This can be over a home network, or you can access the Slingbox anywhere in the world via an internet connection. Helpfully, it's possible to control the source, too.

The 350 is the newest model to be released in the UK. It boasts support for HD (up to 1080p) video streaming, although it's lacking the Freeview-compatible (SD-only) TV tuner found on its stablemate, the PRO-HD.

Small enough to squeeze into most AV setups, its 'industrial' design is certainly eye-catching – it looks more like a South Bank art installation than a media gizmo.

White LED indicators on the front include the traditional Sling logo that informs you when someone is connected to it remotely. The back panel has composite video, component video and analogue stereo passthroughs, which enable one user to watch the source device on a TV while another views it remotely (only one remote user can be connected to the Slingbox at a time). If both are using the same source, they're confined to watching the same thing (a TV channel, for example). You can have two sources connected at once and remotely switch between them but connectivity is limited for this (especially on the audio front).

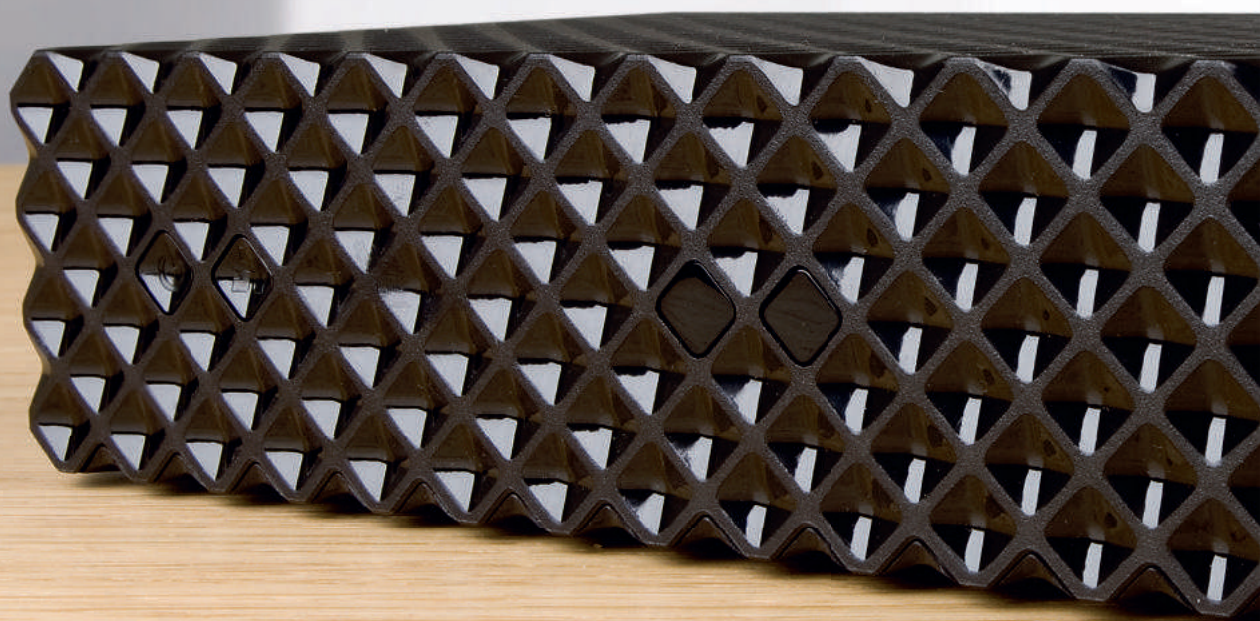
'What about HDMI?' you may ask. Well, the widespread use of HDCP in Europe has meant

Sling Media has chosen not to release a Slingbox with HDMI connectivity in the UK. With component video outputs a rarity on many TV receivers (Sky and Virgin Media boxes included) you'll either need to go composite or get a convertor.

Also on the rear are an Ethernet port for hookup to your router (there's no built-in Wi-Fi) and a USB port. Sadly, unlike the (not officially available in Blighty) Slingbox 500, the latter can't be used to view video and image files stored on attached drives. This seems like a missed opportunity.

Finally, there's an output for the supplied IR emitter cable. This can be hooked up to the kit you want to control if the 350's built-in IR emitters don't prove effective.

The Slingbox 350 looks cutting-edge, but doesn't offer HDMI connectivity



AV INFO

PRODUCT:
Remote media player

POSITION:
Below the Freeview-toting Slingbox PRO-HD

PEERS:
None really, beyond Sky Go and Virgin Media Anytime

Get Slingin'

Ignore the feature setbacks and you'll find myriad ways of watching remotely. You can placeshift via the Slingbox website, using a PC (Windows users have the ability to timeshift, too) or Mac, use a 'SlingPlayer for Facebook' app or embed the 'SlingPlayer' video player in a website or blog.

Then there's the SlingPlayer app available for Windows 8.1 priced at £11, and other SlingPlayer apps (for which pricing flits between £10 and £11) that enable streaming to iOS, Android and Windows Phone devices and Amazon's Kindle Fire tablets. You can also stream from the 350 to a number of connected boxes, such as an Apple TV (using AirPlay and the iOS app) and certain Western Digital WD TV media players and (via the iOS or Android mobile app) Roku streaming players.

The web interface is easy to use. You're required to set up an account and can invite others to watch using Facebook or email. You can also choose quality settings and view in full screen. Assuming remote control of equipment involves selecting it from the lists provided. While these are hardly extensive (users have created their own 'custom' remote controls for hardware which can be obtained from online forums), onscreen remote controls which look like the real thing can be found for numerous commonplace TV receivers

including those from Sky and Virgin Media. The SlingPlayer app also has its own controls.

Sling Media recommends a minimum connection speed of 2Mbps for HD streaming, 600Kbps for SD and 250Kbps for mobiles. Proprietary technology is used to optimise the quality of video streams.

I tested the 350 with a Virgin Media TiVo cable receiver and an A.C.Ryan media streamer. Even in composite quality, TV from TiVo viewed in fullscreen mode using the web interface on a 17in laptop screen looked good when streamed over a home network and using the free Wi-Fi in my local coffee shop. As expected, in both cases there was a (relatively minor) delay between issuing remote control commands and the TiVo responding that took some adjusting to. HD video streamed over my home network from the A.C.Ryan connected using component video looked great, too. Shame I couldn't locate an onscreen remote for it, though.

A niche proposition

The Slingbox 350 has its drawbacks. Charging for the SlingPlayer app seems a bit miserly, as does the lack of USB hookup to enable remote viewing of personal media. However, if you're someone who travels abroad a lot and can't bear to be without your TV fix, this glitzy-looking gadget could be just what you need ■

ON THE MENU



→ The web interface can be used to select streaming quality settings, invite others to watch and switch between sources if have you more than one connected. Onscreen remote controls – like the one for Virgin Media TiVo (pictured here) – are available for many popular set-top boxes

SPECIFICATIONS

CONNECTIONS: Component video passthrough; composite video passthrough; analogue stereo passthrough; Ethernet port; USB port

DIMENSIONS: 178(w) x 44(h) x 112(d)mm approx

WEIGHT: 295g

FEATURES: Streams video and audio from connected sources to devices including computers, mobiles, tablets and supported connected boxes via a home network or the internet; HD video streaming (up to 1080p via upscaling) capability; remote control functionality; built-in IR emitters; SlingPlayer app available for iOS, Android, Kindle Fire, Windows Phone and Windows 8.1 devices



HCC VERDICT



Slingbox 350

→ £130 Approx → www.slingbox.com

HIGHS: Stream TV 'from home' remotely via the internet; easy to use; lots of devices supported

LOWS: Fairly limited connectivity; no TV tuner; no media playback via USB

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★



Better late than never

Largescreen OLED is finally here, with a curved form factor and a reduced price tag. [John Archer](#) is immediately impressed – even if LG's 55in set is only Full HD

AV INFO

PRODUCT:
55in curved OLED
TV with passive 3D

POSITION:
Currently LG's only
OLED TV

PEERS:
Sony-55X9005A
(LED, 4K);
Samsung
UE55F9000
(LED, 4K)

AS FAR BACK as 2008, the AV world was getting excited by the jaw-dropping pictures delivered by OLED technology at various shows around the world. Yet it's only now, at the start of 2014, that we've finally got a big OLED TV on our test bench. The set is LG's 55EA980W: a 55in model that's both surprisingly widely available and unexpectedly affordable at £5,000. Well, 'affordable' is perhaps pushing it, but as initial price mutterings about 55in OLED TVs were in five-figure territory, I'll take five grand.

What's so great about OLED? To recap, the USP is that each OLED pixel generates its own luminance independently, rather than external lighting being applied to the whole screen or screen segments. This has profound implications for contrast, as it means OLED

can potentially deliver full white pixels right alongside full black ones. It should also prove handy with image clarity and colour subtlety, and help remove the motion blur issue associated with poor LCD response times.

The 55EA980W also hammers home OLED's incredible potential for slimness. The outer third or so of its rear is only a few millimetres deep, delivering a mind-boggling style statement that will have all who behold it clawing their eyes out in envy. (The central section of the rear panel sticks out further than the extremities to provide space for a built-in Freeview HD tuner, and connections that include four HDMI's, three USB's and an Ethernet port).

More controversially, the 55EA980W isn't actually flat; it's curved inwards, raising all

kinds of questions – not least whether the curve enhances picture quality or is just pointless technological show-boating.

Because of the curve the 55EA980W isn't designed for wall hanging. Instead, it sits on an attractive transparent curved base containing a pair of – ooh, fancy – see-thru speakers.

Full HD flagbearer

The 55EA980W employs LG's content-heavy and nice-looking Smart TV online hub, DLNA streaming and a passive 3D system. It doesn't, however, support 4K/UHD resolution.

LG has equipped the 55EA980W with its top-tier calibration engine, providing full

'Colour reproduction is stunning, combining potent saturations with exceptionally subtle blends'

management over colour, gamma and white balance, as well as control over all aspects of the set's video processing.

Here's the thing, though. The 55EA980W's OLED picture quality is so spectacular that I found myself fussing way less over the picture settings than usual.

The set's contrast is particularly stellar, showing OLED cruising past plasma in this critical area at the first time of asking. I dug out the suitably dark vampire flick *30 Days of Night* and could scarcely believe how perfectly LG's TV rendered the relentless night-sky backdrop. There's no grey mist over even the most pitch-black corner, and no sign of any light 'block' artefacts nor backlight clouding.

Bright white pixels really can exist right alongside deep black ones. What's more, you don't get the speckling effect sometimes witnessed on PDPs in dark areas.

Without the need to dim its overall brightness to deliver supreme black levels, LG's set offers images that retain fantastic punch and dynamism even when they contain bright and dark material – such as the overhead tracking shot in *30 Days of Night* over the snow-covered streets of Barstow.

Colour reproduction is stunning, combining potent saturations with exceptionally subtle blends for a non-4K panel. This helps create a strong sense of sharpness and clarity – even when there's lots of motion to handle.

The few bright moments in *30 Days of Night* look fantastically bright and punchy, and this punch remains intact even if you have to watch from quite a wide angle.

Viewing from a wide angle, though, highlights my only serious issue with the 55EA980W: the impact the curve has on off-axis viewing. The gentle bend of the LG mucks with the picture's geometry and any content in the picture on the side nearest to you gets distractingly foreshortened.

And, yes, the curve can marginally improve your viewing experience if you're sat in exactly the right place. It makes pictures feel slightly more immersive. If the screen were bigger the viewing 'sweet spot' would grow, too, but on a 55in screen the curve creates an oddly individual viewing situation. Hmm.

The 55EA980W gets back to its main business of dazzling punters with its audio performance. The see-through speakers in the stand can certainly be heard even if they can't be seen, producing levels of volume and dynamic range that humble the sound produced from much larger speaker enclosures found on rival TVs. The gentle inward and upward angling of the drivers also helps lock dialogue to the onscreen action. In its own way this audio performance from such a phenomenally thin screen is almost as big an achievement as the OLED picture quality.

The only thing that feels anything other than 'next-generation' about the 55EA980W's performance is its 3D playback. While stereoscopic material undoubtedly looks very tidy, with no crosstalk, good colour and an enhanced sense of depth (thanks to the extreme contrast and, possibly, the gentle immersive effect of the curve) the way passive technology reduces the sharpness and detail of Full HD 3D Blu-rays (by effectively halving vertical resolution) does seem rather at odds with the OLED precision elsewhere.

We want more pixels

The low-res passive 3D performance is a painful reminder that the 55EA980W doesn't have a native 4K resolution. This is probably the single biggest reason you will find not to splash five grand on it. Apart from not having five grand in the first place.

The OLED story feels somewhat incomplete in its non-4K form, and giving the screen a shallow curve doesn't make up for it. However, the 55EA980W still lives up to OLED's promise, confirming its status as the AV world's most exciting picture technology. And, with LG being the only brand showing a commitment to OLED, those seeking its astonishing picture quality just have to give this 55in set an audition ■

ON THE MENU



→ The 55EA980W offers a full suite of calibration tools including ISF Day and Night settings. The Smart portal is one of the best around, although LG's forthcoming TVs will use an improved WebOS interface

SPECIFICATIONS

3D: Yes. Passive
4K: No. 1,920 x 1,080
TUNER: Freeview HD and satellite HD
CONNECTIONS: 4 x HDMI; 3 x USB; Ethernet; Scart; composite video input; optical digital audio output; stereo audio input; component video input; PC input
SOUND: 40W (10W x 4)
BRIGHTNESS: N/A
CONTRAST RATIO (CLAIMED): Infinite!
DIMENSIONS: 1,227(w) x 798.5(h) x 192(d)mm
WEIGHT: 17.2kg
FEATURES: OLED panel technology; curved form factor; Smart TV with Magic Remote interface; colour management; white balance management; gamma management; TruMotion motion processing; Triple XD Engine; Dual Play 3D; seven picture presets; USB recording; DLNA media playback; Miracast; NFC; built-in Wi-Fi

HCC VERDICT



LG 55EA980W

→ £5,000 Approx → www.lg.com/uk

→ Tel: 0844 847 5454

HIGHS: Unprecedented HD picture quality; stunning design; strong Smart TV system; startlingly good sound

LOWS: The curve isn't very family friendly; it's not 4K; obviously it's not cheap; can't be wall-mounted

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★

The TV's curved form factor prohibits wall-mounting

All bargain, no basement

The latest appealingly affordable DLP projector from BenQ packs enough features and picture talents to keeps most sides of **John Archer** happy

THE CURRENT RATE

of improvement at the affordable end of the DLP projector market is a force to be reckoned with – a force led predominantly by BenQ, which has a string of models hovering above and below the £1,000 mark.

Its new W1400 retails for £1,100 and boasts a feature count that really has no business belonging on such a nicely-priced projector. Kicking things off is a DarkChip 3 optical system, as often found on more expensive single-chip DLP models. It also sports 3D playback (with one pair of glasses in the box); a Full HD resolution; high claimed contrast ratio and brightness figures of 10,000:1 and 2,200 Lumens respectively; and enough picture calibration tools (including colour, gamma and white balance management) to earn ISF endorsement. There's also a judder-tackling frame interpolation system (the main difference between the W1400 and the slightly cheaper W1300), a healthy 1.6x level of optical zoom and even a vertical image shifting system – something far from a given at this price.

Winning start

As I'd hoped given BenQ's recent heritage, the W1400 quickly establishes itself as a very good movie machine for its money. During

a run-through of *Rush*, colours immediately make a strong impact with their winning combination of dynamism and surprising blend subtlety. Even skin tones during darker scenes look natural.

I'd normally expect colours this credible to be accompanied

BenQ's W1400 offers vertical lens shifting and a 1.6x zoom

by strong black levels, and so it proves on the W1400. Dark sequences are afflicted only by a very gentle sense of greyness over their blackest bits.

The W1400 pumps out all the scintillating hi-def detailing of *Rush*'s trackside footage, and this clarity is mostly retained during the movie's high-speed races thanks to the projector's surprisingly good motion handling – even with the Frame Interpolation system deactivated.

Add to the strengths already covered a mainly crosstalk-free and bright 3D performance, plus little bother from single-chip DLP's 'rainbow effect' (colour striping over bright areas) and dot noise problems, and you really have got an excellent effort for £1,100.

There are, though, a few problems. First, gamers will be disappointed with the 100ms of input lag I measured, as this amounts to enough of a delay in rendering pictures to damage your skills. Damn. Also, while dark scenes look dark, they do also look a touch hollow thanks to a lack of shadow detail. Finally, dark scenes during 3D playback are oddly suffused with a quite noticeable red undertone, and the W1400 runs a bit noisily in its full lamp power mode – though you should only really need to use this mode for 3D if you've darkened your room well enough.

Overall, though, the W1400 is a great, entry-level projector package ■

SPECIFICATIONS

3D: Yes. Active
4K: No. 1,920 x 1,080
CONNECTIONS: 2 x HDMI; component video input; composite video input; D-Sub PC port; RS-232 control port; 12V trigger
BRIGHTNESS (CLAIMED): 2,200 ANSI Lumens
CONTRAST (CLAIMED): 10,000:1
DIMENSIONS: 339(w) x 120.2(h) x 285(d)mm
WEIGHT: 3.9kg
FEATURES: Frame interpolation; one pair of 3D glasses included; ISF certification; colour management; BrilliantColour processing; 2 x 10W speakers; 1.6x zoom; vertical lens shift; 2D-3D conversion; DarkChip 3 DLP technology; SmartEco mode

HCC VERDICT



BenQ W1400

→ £1,100 Approx → www.benq.co.uk
HIGHS: Great value; excellent pictures for the money; good calibration and setup options
LOWS: High input lag damages gaming; red undertone to dark 3D footage; some missing shadow detail in dark scenes

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★

AV INFO

PRODUCT: Single-chip, Full HD, 3D DLP projector

POSITION: Quite high up in BenQ's extensive range, below the 'Theatre' models

PEERS: Epson TW3200; BenQ W1300; Optoma HD30

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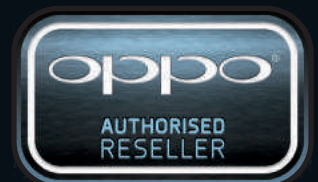
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It's time to Q the music

Q Acoustics' revamped 5.1 package has a refined, smooth sound that **Ed Selley** discovers works well with both stereo and multichannel material



Don't want white? The Q7000i can be bought in gloss black, too

the overall fit and finish is of a high quality. Despite the curved cabinets, this is not the most visually interesting speaker package on the market, though.

Smooth mover

In keeping with the theme of evolution rather than revolution, the Q7000i is not radically different from the original 7000 but this is no bad thing.

The performance has the same smoothness and control that has come to define Q Acoustics speakers, and this gives the 7000i a sense of civility with the bass-heavy insanity of *Pacific Rim*. As you might expect with identical drivers all round, the handover from speaker to speaker is seamless and they conjure a convincing surround performance. Dialogue is usually clear and easy to follow and the tonal accuracy of the array is consistently good. Every now and again, you might find yourself craving a little more dynamism and punch, but few packages that can generate that sort of excitement are so refined.

The new subwoofer is deeply impressive, too. It might have lost a fraction of absolute bass extension from the older model but it integrates beautifully with the satellites and augments them without ever dominating the performance. This has the benefit of making the 7000i absolutely superb in stereo – in fact, it's one of the very best affordable 2.1 systems I've spent any time with.

Against these positives, the downsides are limited. The speakers, with their sensitivity rating of 85dB, need a good dollop of amplification to wake up. And by the same token, they sound much more full bodied and spacious with a decent amount of volume behind them. Lower levels can leave soundtracks soft and less well defined.

That said, the Q7000i array should win itself admirers. It hits a lot of right notes, including the tricky business of stereo, and comes in under that key £1,000 price point ■

Q ACOUSTICS IS in the 'difficult third album' phase of its existence at the moment, faced with the task of keeping its speakers at the top of the tree while battling stiffer competition and rising expectations on the part of press and public. The original 7000 Series was highly regarded and now Q Acoustics has been a-fettlin' and the result is the 7000i.

On the face of it, the 7000i doesn't look any different from the original version. The five satellites are still the pill-shaped enclosures from before and mount two midrange units and a tweeter. The drivers are new, though. A ring radiator tweeter is paired with revised midrange drivers featuring increased excursion over the older model.

The 7070Si subwoofer is a significant change over its predecessor. This new bass bin again uses a side-firing driver hidden behind one wall of the chassis, but the driver is now 8in instead of 10in and the side is no longer removable. Cable management and the positioning of the controls has also been improved and the result is a smaller, neater package. In keeping with the satellites,

AV INFO

PRODUCT: Mid-range sub/sat speaker package

POSITION: Similar price to the more traditional 2000i 5.1 array

PEERS: Cabasse Eole 3; KEF E305; Dali Fazon Mikro

SPECIFICATIONS

Q7000LRI

DRIVE UNITS: 2 x 3in long-throw midbass drivers; 1 x 1in tweeter

ENCLOSURE: Sealed

FREQUENCY RESPONSE: 95Hz-20kHz

SENSITIVITY: 85dB/W

POWER HANDLING: 15-100W

DIMENSIONS: 100(w) x 240(h) x 160(d)mm

WEIGHT: 1.6kg

Q7000Ci

DRIVE UNITS: 2 x 3in long-throw midbass drivers; 1 x 1in tweeter

ENCLOSURE: Sealed

FREQUENCY RESPONSE: 95Hz-20kHz

SENSITIVITY: 85dB/w

POWER HANDLING: 15-100w

DIMENSIONS: 240(w) x 100 (h) x 160(d)mm

WEIGHT: 1.5kg

Q7070Si (SUBWOOFER)

DRIVE UNIT: 8in doped paper bass driver

ENCLOSURE: Sealed

FREQUENCY RESPONSE: 35-200Hz

ON BOARD POWER: 150W

REMOTE CONTROL: No

DIMENSIONS: 198(w) x 320(h) x 460(d)mm

WEIGHT: 13.8kg

CONNECTIONS: Speaker-level input; LFE input

HCC VERDICT

Q Acoustics Q7000i

→ £900 Approx → www.qacoustics.co.uk

→ Tel: 01279 501080

HIGHS: Beautifully integrated and spacious sound; phenomenal in stereo; excellent build quality

LOWS: Slightly soft at low levels; expensive floorstands (£150 per pair); speaker terminals only accept bare wire

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★

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Carving out its own bigscreen niche

Martin Pipe enthusiastically embraces the junior member of Epson's home cinema 3D PJ family – and likes the fact it leaves him with plenty of cash to spend on BDs

AV INFO

PRODUCT:
Mid-range Full HD
3D LCD projector

POSITION:
Entry ticket to
Epson's 'home
cinema' range

PEERS:
Sony VPL-HW55ES;
Panasonic
PT-AE6000E;

THIS YEAR, PROJECTION specialist Epson has rejigged its product lineup to target the bigscreen movie fan who wants to step up from a £1,000 model but isn't ready to enter the competitive mid-range market where Sony, JVC and Panasonic are also trading blows. The result is the EH-TW7200, its 'entry-level' 3D model that retails for approximately £1,900 – a price point that other brands seem to ignore.

Essentially this three-chip Full HD LCD design replaces last year's £2,300 EH-TW8100, but with some differences.

Most notably, the handset – a nicely-designed zapper with good-sized buttons and switchable backlighting in tasteful green – totes a frame interpolation button (Frame Int), which, when pressed, rewards you with nothing more exciting than a 'this button can't be used' message. This, of course, is because Epson hasn't updated its handset design, and the EH-TW7200 has been stripped of frame interpolation. A pity, since Epson's tech has

proved quite effective at reducing motion judder with some content.

The EH-TW7200 is physically quite large, which helps to disperse heat and reduce reliance on cooling fans. Indeed, it's very quiet in operation – certainly in the 'low power' mode that extends the claimed lamp life from 4,000 to 5,000 hours and improves blacks.

The excellent fundamental design of the TW7200 can also be found in the optical system, which is easy to set up and, better still, free of drift. On the top panel are wide-ranging lens-shift thumbwheels for accurately centering the projected picture on your screen. The lens itself incorporates a pair of rings for focusing and zoom; this all-important glassware is protected from dust by a motorised shutter when the PJ is turned off.

Thanks to Epson's well thought-out design, basic installation can be completed within minutes. A blue 'grid-and-circle' test-pattern generator is provided to help you register your image correctly.

Right: The EH-TW7200 offers a 12V trigger for automated setups

There are four default 'color' (picture) modes, plus two more for 3D viewing. They can deliver stonkingly good results out of the box, 'cinema' being particularly praiseworthy. In its marketing, Epson places a lot of emphasis on colour; in particular, the use of 'colour light output' (CLO) – measuring the light output of primary colours, as opposed to traditional 'white-only' brightness – to spec projector performance.

While the presets may be good, that's not to say the odd tweak here and there doesn't help. Thankfully, the picture setup functions are driven from a comprehensive battery of menus. Basics like saturation, tint, contrast, skin-tone, colour temperature and sharpness

'The Epson combines a freedom from motion artefacts with a wide colour palette and strong dynamics'

are supplemented by an 'advanced' menu that lets you wrest control over gamma, RGB offset/gain (or RGBCMY) levels, white level, lamp brightness and auto-iris.

These settings can be saved to one of ten renameable memories for instant recall from the remote. Other buttons switch between the available input sources (which include two HDMI ports), toggle through the three aspect ratios and engage 'Super Resolution'. The latter, a fancy 2D-only sharpness boost, can highlight intricate areas. If it's wicked up too high, though, an unpleasant haloing artefact sets in – use it sparingly, if at all. Overall, the TW7200 is as easy to use as it is to configure.

Colourful cartoons

A few recent episodes of *The Simpsons* (2D broadcast) demonstrated how well the TW7200 copes with bright colours, thereby going some way to justify Epson's CLO claims. They are perfectly registered too, with no bleed. LCD projectors have come far in the last decade; no longer are they a poor second to the DLP competition. I'd even go as far as to say that colours are more vibrant than those from some of the three-chip DLP projectors

that were available not so long ago. Plenty of detail is buried in this iconic 'toon on closer inspection, and the TW7200 does justice to it.

Next up was *The Wolverine* (2D Blu-ray). This visually stunning movie is set in Japan, a country that happens to be wonderfully filmic – whether we're examining the subtle hues of a traditional building, or the complexity and pace of its unique urban sprawl. In the opening scenes, Logan (Hugh Jackman) saves soldier Yashida from the Nagasaki atomic bomb, and the resulting explosion is rendered with true-to-life realism as it spreads from the city to the prison-camp. The Epson combines a freedom from untoward motion artefacts with a wide colour palette and strong dynamics.

Indeed, the wide contrast range is evident later in the film. Following a bullet-train Yakuza-pursuit sequence, Logan and Yashida's granddaughter Mariko travel to a retreat in the same area of present-day Nagasaki. It's dusk, and the interior of the home is dimly-lit. Yet considerable shadow detail is visible, and the textures and colours of the wooden construction – together with the subtler flesh-tones – are accurately portrayed.

The auto-iris may work better than that built into some units, but some 'pumping' is visible on occasions; for this reason, I turned it off. Doing so impacts black levels slightly, but it's a price worth paying.

With 3D content, the light-attenuating properties of the glasses contribute to decent blacks (although the projector provides compensation). My 3D demo disc was Baz Luhrmann's realisation of *The Great Gatsby*. The TW7200 did a fine job handling the recreation of 'Jazz-Age' New York; sniffing out the stunning detail that grips your attention. *Gatsby*'s lavish parties looked fantastic in 3D, as did the shots that zoomed across the water from his mansion to the Buchanan residence. The only real fly in the ointment is a perceptible degree of judder. And there's no smoothing mode to experiment with, remember...

Money well spent

In all honesty there's little to criticise here. The TW7200 represents a lot of projector for the money, and though it lacks the ISF calibration modes of its bigger brothers can nevertheless be tweaked to give a very fine picture indeed. An essential audition ■

ON THE MENU

→ The comprehensive menus include six picture presets (four for 2D viewing, two for 3D fare), but if none of these suit, a colour management system, white balance and gamma controls are squirrelled away in the 'Advanced' section

SPECIFICATIONS

3D: Yes
4K: No, 1,920 x 1,080
CONNECTIONS: Composite input; component input; VGA input; 2 x HDMI inputs; mini-USB service port; RS232; 12V trigger output
BRIGHTNESS (CLAIMED): 2,000 ANSI Lumens (CLO)
CONTRAST (CLAIMED): 120,000:1
DIMENSIONS: 466(w) x 140(h) x 395(d)mm
WEIGHT: 8.6kg
FEATURES: 3 x 0.74in polysilicon TFT 16:9 LCD panels; eco mode; 2.1x zoom lens; vertical/horizontal lens shift; automatic lens shutter; RGB/CMY colour adjustment; +/- 30 degrees electronic keystone correction; one pair of 3D glasses supplied; 230W lamp with (claimed) life of up to 5,000 hours; 22dB fan noise (eco mode); six picture modes; 240Hz 2D refresh rate; 480Hz 3D refresh rate; auto-iris; 'Super Resolution' enhancement; overscan; picture-in-picture; test-pattern generator

HCC VERDICT



Epson EH-TW7200

→ £1,900 Approx → www.epson.co.uk
 → Tel: 0871 423 7766

HIGHS: Easy to set up and drive; superb colour reproduction and dynamic range; 3D crosstalk minimised

LOWS: Some motion-judder visible with 3D; fan noise more noticeable in 'full-brightness' mode; slight input lag and input-switching delay

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★



Smallscale cinema delights

There are plenty of ultra-affordable AV receivers on the market – but what speakers should you partner them with? **Adrian Justins** reckons Tannoy's budget sub/sat package is a good option



IF YOU'RE LOOKING for a no-nonsense, 5.1 speaker package for around £500 (or even less if you shop around) then the Tannoy HTS-101 has to be on your radar.

The sharp-edged satellites may be lacking in design flair, but are noteworthy for their hefty construction, being fashioned from high-density wood and coated in more lacquer than Clark Gable's barnet in *Gone With The Wind*. With rubber feet, each one can be shelf mounted. Alternatively, supplied brackets enable them to be fixed to a wall, and considering their small size this may be a good option for many.

Each cabinet sports robust binding posts, while the front grilles can be prised off to reveal the drivers – a 0.75in tweeter and 3in midbass on all but the centre channel, which has an additional midbass unit. The aesthetically matched sub features a downward-firing 8in woofer, tickled by a 100W amp. Not the most exciting of specs, but you get what you pay for.

Like a pre-season Lewis Hamilton these drivers need a good few hours behind the wheel before they get in to their stride but

once they're up and running their performance is exceptionally good. High-resolution Blu-ray soundtracks are the perfect fodder for the HTS-101, which delivers an incredibly involving sound for the money. They are impressive at finding the subtle

details that can disappear with inferior speakers – during the first cave scene in *Prometheus* (DTS-HD MA) the sound of water gently trickling down the sides can be clearly heard from behind. Later, incidental sounds, such as the mapping droids and buzzing of electronic instruments on the ship's deck, are conveyed with real clarity from the satellite array. There's so much going on aurally, including the orchestrated score, but the HTS-101 deftly produces the sonic goods.

To give the system – especially the subwoofer – a real run for its money, I reverted to *Sherlock Holmes: A Game of Shadows* on BD and the woodland fire scene. Here, bullets slice through the air, brilliantly passing across the soundstage. Despite the cacophony, the sound of trees shattering emerges with force from the rears, as does the debris falling upon Holmes. When the big gun ('Little Hansel') grinds into action it doesn't sound overly harsh and metallic. Upon firing, the subwoofer underpins the blast with rich bass notes, without totally matching the onscreen destruction in terms of scale or depth.

Energetic performer

Overall, the Tannoy HTS-101 doesn't have enough might for larger rooms but for a small-to-medium setup where funds are limited it does a terrific job. It's a wonderfully energetic performer, without colouration or tonal distortion. When watching TV, dialogue in particular is much more resonant and authoritative than you can get out of any built-in speakers. The woofer is a bit of a beast, physically, but space-conscious buyers can get this array as a 5.0 and use a more compact sub if they really wish ■

SPECIFICATIONS

HTS SATELLITE

DRIVE UNITS: 0.75in titanium WideBand dome tweeter; 3in midbass paper cone driver
ENCLOSURE: Sealed
FREQUENCY RESPONSE: 100Hz-40kHz
SENSITIVITY: 87dB
POWER HANDLING: 25-100W
DIMENSIONS: 106(w) x 160(h) x 142(d)mm
WEIGHT: 1.4kg

HTS CENTRE

DRIVE UNITS: 0.75in titanium WideBand dome tweeter; 2 x 3in midbass paper cone drivers
ENCLOSURE: Sealed
FREQUENCY RESPONSE: 100Hz-40kHz
SENSITIVITY: 87dB
POWER HANDLING: 25-100W
DIMENSIONS: 250(w) x 106(h) x 166(d)mm
WEIGHT: 2.3kg

HTS SUB

DRIVE UNITS: 8in long-throw, downward-firing paper cone bass driver
ENCLOSURE: Ported
FREQUENCY RESPONSE: 29Hz-200Hz
ON BOARD POWER: 100W
REMOTE CONTROL: No
DIMENSIONS: 275(w) x 420(h) x 370(d)mm
WEIGHT: 10kg
CONNECTIONS: LFE input; speaker-level inputs

AV INFO

PRODUCT: Affordable 5.1 sub/sat system

POSITION: Tannoy's budget multichannel offering

PEERS: JBL Cinema 510; KEF KHT-1505

HCC VERDICT

Tannoy HTS-101

→ £500 Approx → www.tannoy.com

→ Tel: 01236 420199

HIGHS: Rigid construction; excellent clarity; easy to setup and install

LOWS: Look like something out of the 1980s; not so thrilling with music

Performance ★★★★★

Design ★★★★★

Features ★★★★★

Overall ★★★★★

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Baby brother keeps it in the family

This 5.1 system eschews tallboys for dinky satellites, but still impresses **Danny Phillips**

The HT-F6500 is a smaller and more affordable version of Samsung's expensive HT-F9750W, replacing the flagship system's tower speakers with curvy compact satellites.

The feature list includes a wealth of on-demand content, available to stream via built-in Wi-Fi. BBC iPlayer *et al* sit alongside LoveFilm and Netflix in the eye-catching Smart Hub GUI. You can also play formats over a network, including DivX HD, MKV and FLAC.

The valve-amp powered system claims 1000W and boasts DTS Neo:Fusion, a mash-up of DTS and Samsung processing that adds height to the soundstage.

Build quality is plasticky but the alluring gloss-black finish hides a multitude of sins. The MDF sub is less attractive but mercifully slim. Connectivity includes two HDMI inputs and optical digital input. There's no auto calibration but the setup menu offers some tweaks.

The HT-F6500 handles the rowdy soundtrack of *Transformers: Dark of the Moon* admirably. Explosions, dumb dialogue and the metallic crunch of robots walloping each other are all conveyed with surprising clarity and

control. Bass is boomy at times but generally deep and cohesive. It steers effects around the soundstage quickly and with tonal uniformity, while high frequencies are smooth.

DTS Neo:Fusion does a decent job, even without the benefit of the HT-F9750W's towers and swivelling drivers. The soundstage becomes fuller and more expansive.

Samsung's system lacks the large-scale dynamics and insight of decent separates, plus there are hints of harshness at louder volumes, but no more than I'd expect from a £400 setup. Add BD playback and its media talents and you've got a terrific one-box system ■

The main unit sports Samsung's valve-amp technology



HCC VERDICT

Samsung HT-F6500 → £400

Overall ★★★★★

LG LAP340 → Approx £350

LG steps up to the plate...

...but **John Archer** finds its performance to be more low-fat than Full English

LG'S FIRST ENTRY into the brave new world of soundbases (soundbars you can sit your TV on, basically) is nothing if not stylish. Particularly striking is how impressively trim the LAP340 'SoundPlate' is; you hardly notice it's 35mm-high form is there when your display squats on it. But it's also attractively adorned in a high-quality textured exterior that's strong enough to accommodate weights up to around 37kg. Or, to put it another way, one heck of a chunk of TV.

LG has shoehorned a 120W 4.1-channel speaker configuration into the LAP340's diminutive form, comprising four front-firing drivers and a pair of downward-firing subwoofers. It doesn't sport an LED display, though, so you're reliant instead on a less-useful coloured light system to help you navigate its options. Also, the LAP340's connections only run to an optical digital audio input and Bluetooth; there's no NFC or HDMI support.



LG's soundbase is one of the most slender on the market

Keeping it low

In action, the LAP340 sounds okay – up to a point. That point being dense, action film content played at any truly significant volume...

The problem is that the LAP340's power handling and dynamic range are rather limited by soundbar standards, so that when pushed hard it starts to sound muddy, harsh and even a bit distorted and 'phutty' as the low-frequency sounds cause the cabinet to rattle.

With relatively undemanding content (including music streamed via Bluetooth), or at low volumes, the LAP340 offers a definite improvement over a typical flat TV

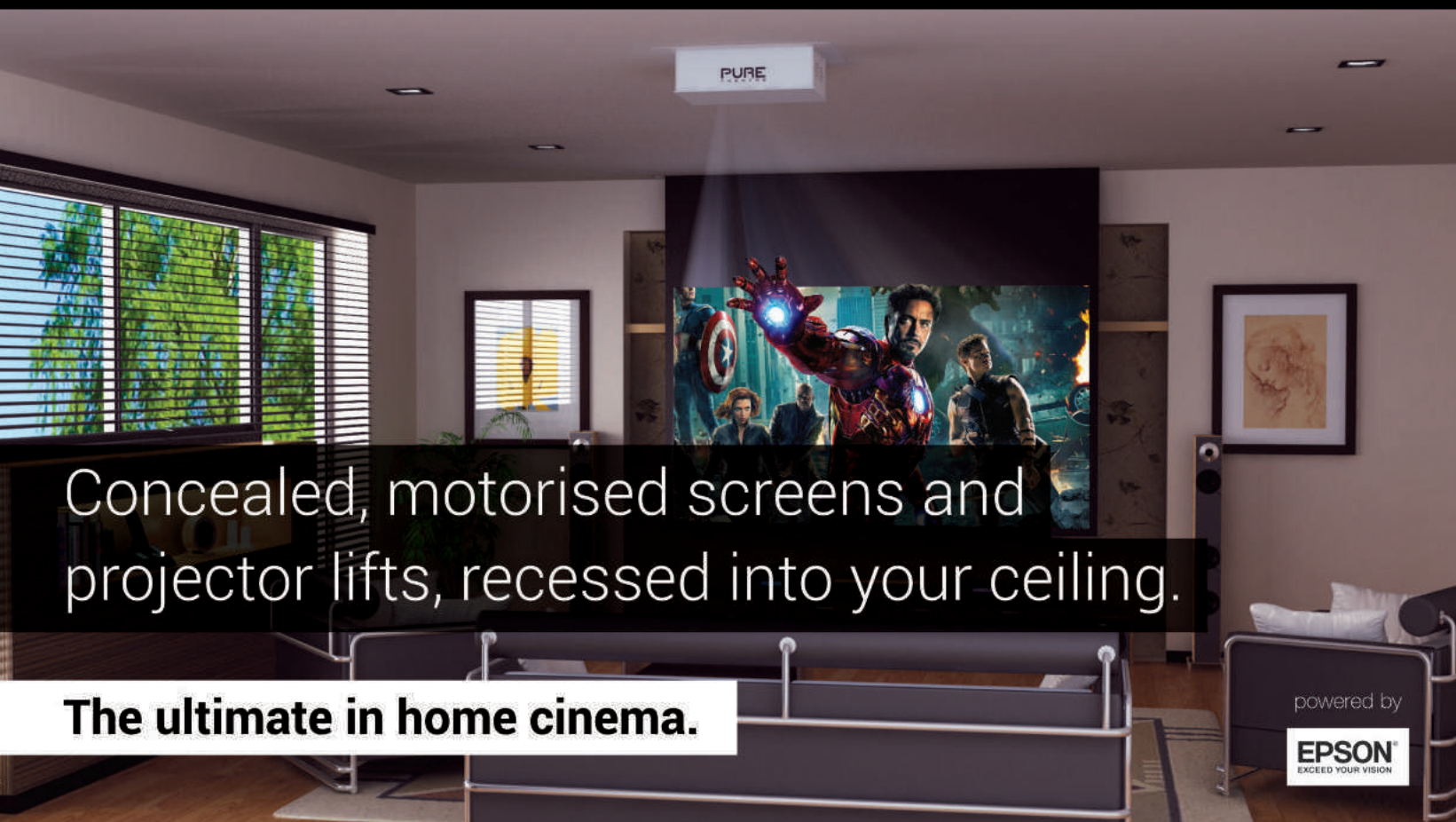
audio performance, with some impressive clarity and soundstage effects precision. But as a fan of big Hollywood blockbusters, I'd personally trade some of the LAP340's style (and price tag) for something with a bit more sheer grunt ■

HCC VERDICT

LG LAP340 → £350

Overall ★★★★★

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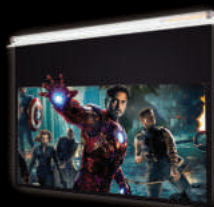
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Time to replace the remotes

Adrian Justins enjoys a universal control app that majors in macros

FOR THOSE IN the know, Nevo used to mean complex remotes and hardware for the custom install market, but OneForAll has resurrected the brand name for a downloadable app that turns an Android tablet or iPad into a universal remote control. It works in combination with the URC8800, a small wireless bridge that emits IR signals from its fascia as well as via a corded extension.

Delving into the database

With the bridge hooked on to your Wi-Fi network, setup is a straightforward process of finding kit from OneForAll's 300,000-strong online database. Most items are honed in on by the app asking you to try a sample button, but you can simply enter the model number and be done with it. Once setup, you select a device from a large icon and a generic image of a remote appears on the left, allowing you to zoom in on a section of its controls. You can



edit the virtual remote control functions but entering letters to search Sky's EPG seems beyond the app's grasp.

That aside, on my 7in Archos tablet the app worked really well, with clear, responsive graphics and faultless execution of commands. Up to 20 macros can be easily added – for example I soon had the app set to switch on my Sky box, amplifier and TV and

The small URC8800 wireless bridge won't upset your feng shui

select the correct inputs. This is the Nevo's real strength, as an app in itself isn't always faster than having separate remote controls.

The built-in EPG is the least impressive aspect of the app, but it makes a useful backup for browsing schedules without disturbing your family's live TV viewing. Overall, this

is a solid control option at a tempting price ■

HCC VERDICT

One For All Nevo → £60

Overall ★★★★★

SIMPLE AUDIO LISTEN → Approx £400

Simply rather stunning

Mark Craven auditions some Bluetooth/PC speakers that mix artful design with audio prowess

THERE ARE MANY reasons you might want some smallscale active speakers in your life – bringing quality audio to an office, bedroom or kitchen being the most obvious. The market

is booming, so it certainly helps that Simple Audio's Listen cabinets, while being pricier than some rivals, sport a fabulous design. They're 20cm-high, neatly dressed in black fabric grilles and aluminium chassis, and blend in easily wherever you put them. Inputs include Bluetooth, 3.5mm and USB, via a supplied adaptor, so feeding them shouldn't be a problem.

Desktop divas

Simple Audio reveals that the Listens' tweeter and midbass drivers are pushed by separate amps. Other audiophile niceties include a dose of DSP and passive drivers to aid bass performance. The result is highly impressive. These desktop divas easily

convey the laidback '70s groove of Led Zeppelin's *The Rover*, with the rich bass notes and Robert Plant's wailing vocals perfectly balanced. More importantly, they're unfazed by full-bodied tracks; Manic Street Preachers' *Motorcycle Emptiness* is anything but empty, and the clarity of the rhythm section, strings, vocals and lead guitar is superb, even as the track swells towards its climax.

Stereo imaging is good, the sound is large and, aside from the lack of user EQ (which might help to tame a slight bass-heavy bent), I have little to complain about. Even the touch-sensitive controls are über-cool ■



The two speakers tether via a custom cable – two lengths are provided

HCC VERDICT

Simple Audio Listen → £400

Overall ★★★★★



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Accessorize me!

Headphones

A good pair of 'phones could massively increase the time you spend enjoying your AV setup. **Ed Selley** auditions four over-the-ear models that promise comfort and quality

VERY FEW PEOPLE set out to create an AV system that they then have to listen to at barely audible volume levels. Modern life being what it is though, some of us find that children, sleepy members of the household or neighbours who could be used as GCHQ listening devices conspire against a really loud listen. A good pair of headphones can therefore be exactly what you need to keep getting thrills from your system when speakers are not an option.

The good news for anyone looking for a pair of cans is that at the moment the choice of models on sale has probably never been

greater. The boom in tablets and smartphones has seen new brands springing up everywhere, (think Beats by Dr Dre) as well as existing manufacturers developing new models. In fact,

'The boom in tablets and smartphones has seen new headphone brands popping up everywhere'

outside of soundbars (and soundbases), it's hard to think of a market that has grown so rapidly in recent years.

Beyond fiddly in-ear models, buyers have the choice of a full-size pair of home headphones or a 'hybrid' design intended to be as happy used on a commute as they are on the sofa. This roundup pits two hybrids from well-known brands entering the market against two pairs of more traditional home headphones from established marques. Can you really have a pair of headphones for use everywhere, or will the more specialised approach win out?

Approx £300 → www.focal.com

Focal Spirit Classic

There's more to these 'phones than the hot chocolate finish

FOCAL ALREADY MAKES fully portable headphones in the shape of its Spirit Ones, and the Spirit Classics are what the French audio marque calls a 'Nomad' design. In other words, almost a conventional pair of home headphones with enough nods to portability to make them suitable for commuting and the like. The Spirit Classics are smaller than the whopping pair from roundup rival HiFiMan but still a fairly large proposition. They're supplied with a choice of cords for home and portable use and, at 4 metres, the longer domestic one should stretch to your AVR without too much fuss.

Built around a pair of 40mm drivers, the Spirit Classics are a semi-open design, yet in practice leak very little noise to the outside world, which makes them handy for use on the move and if you have people in the same room as you. The build quality is exemplary, and the 'Hot Chocolate' dark brown finish looks suitably smart as well. They're extremely

comfortable to wear, with a good range of adjustment catering for all shapes of noggin.

Driving rain

Connected to my AVR, the Focals show some consistent traits across movies and music and most of them are welcome. The rain-soaked final race in *Rush* is peppered with plenty of lovely incidental details and the movement of the hi-octane cars is convincing. These 'phones don't have the biggest sound going, though – the studio space around Helen Mirren in *Hitchcock* doesn't feel as large as some rivals can make it, but the detail and weight brought to dialogue is good.

With a quick blast of Paul Simon's *Love is Eternal Sacred Light* (FLAC), the Spirit Classics showcase a well-timed and pleasing performance. Only a slight lack of bass presence counts against them. All in all, a fine all-round set of cans.



HCC VERDICT

Focal Spirit Classic → £300

Overall ★★★★★



HCC VERDICT

Grado SR325is → £300

Overall ★★★★★

Grado SR325is

Sonically talented, but uncompromising in design

THESE GRADO HEADPHONES are the most home-oriented of all the designs here. The flagship model in the Prestige range, they are completely open-backed and the only model in this quartet that comes with a quarter-inch jack as standard. This in turn is attached to a fixed two-metre cord, so if you don't have a full-sized socket within that distance, the Grados won't work for you.

The open enclosures house a 40mm dynamic driver of undisclosed construction with a simple foam pad to enclose the ear. The retro looks won't be to everyone's taste but they are nothing if not distinctive.

Noise leakage is considerable, so anyone in the same room as you is going to be hearing a lot of what you are. Build quality is good, though, and I found them reasonably comfortable to wear for long periods. The sensitivity is usefully high too; you won't need to run an amp especially hard to achieve a reasonable listening level.

Pole position

In use, these demonstrate a level of detail retrieval that none of the other designs in this group test can get close to. The sound of the cars in *Rush* is absolutely jam-packed with subtle nuances that the other three headphones simply can't find. This is coupled with effects placement and a sense of space that is truly exceptional. With *Hitchcock*, the movement of people around Helen Mirren in the studio is almost as convincing as it is with a full surround system, and this is married to very believable tonality with voices and instruments.

Where the Grados are less impressive is in terms of bass extension. The cars in *Rush* snarl and fizz their way past but don't have quite the level of punch I was hoping for. This hampers music, too; the Paul Simon track has the same wonderfully spacious presentation but these 'phones doesn't always have the full-range energy to make it truly exciting.

Approx £270 → www.electromod.co.uk

HiFiMan HE-300

Want to feel the full force of film soundtracks? Look no further

AMERICAN BRAND HIFIMAN usually specialises in planar magnetic headphones that work on a different principle to traditional dynamic designs. This makes the HE-300s a bit of an oddity, as they employ a conventional dynamic driver design – albeit with 50mm units that are the largest in this roundup. The rest of the HE-300s are pretty burly, too – these are the largest model here and should easily encase anyone's ears.

Connection selections

The HE-300s have a bespoke connection at the headphone end and need both earpads connected. The supplied cable is three metres long and has a 3.5mm termination with quarter inch adapter, meaning you can use it with portable devices as well as your domestic kit. Build quality is good, and for a big pair of cans they're seductively light. Donning the HE-300s for a two-hour movie won't result in a headache.

Thankfully, the size of the HE-300s does seem to make itself felt. The presentation of *Rush* has a weight and power to it that outdoes the competition; the HiFiMans invest Ron Howard's biopic with an impact and cinematic scale that is superbly enjoyable. Yet this meatiness is something that the HE-300s are able to rein in when necessary; my reference scene from *Hitchcock* is well handled, if not as absolutely free of constraint as with the Grado pair. There is a sense that some incidental detail that the Grados – and to a lesser extent the Focals – can find but nothing feels obviously lacking in the performance.

The final piece of the puzzle is that the HE-300s sound fun with music. Paul Simon's country-tinged foot-stomper motors along with real conviction and drive, and the same impressive scale and depth that makes movies work is equally effective. In fact, there's little here that doesn't impress.



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HCC VERDICT

HiFiMan HE-300 → £270

Overall ★★★★★



HCC VERDICT

NAD HP50 → £250

Overall ★★★★★

NAD HP50

For those who like their movies on the move

THE KEENLY-PRICED NADS are a half-brother of the PSB M4U1s that did so well in our headphone roundup last year – both brands share the same parent company. To this end, they use the same 40mm drivers and extensive acoustic calculations that went into creating the PSBs. Yet the HP50s are a rather more restrained-looking offering, and slightly more comfortable thanks to larger earpads. A neat touch is that the connecting cable can be connected to either pad, which is actually more useful than you might at first imagine.

The HP50s are the most portable of the headphones here and come supplied with a smart carry case. In terms of design, they're also the most stylish. The bundled cable is only 1.3m long but the 3.5mm connection at the headphone end should make finding a longer alternative easy. As with all these mid-range 'phones, build quality is hard to fault, although the HP50s don't feel as hefty as their rivals.

Closed back, open sound

The NADs manage to unpick *Rush's* soundtrack quite successfully and produce an enjoyable listen. There's not the greatest level of fine detail, and the presentation lacks weight, but the sound is controlled and has a decent sense of space to it. This openness is present in *Hitchcock*, too, and is quite an achievement given that the NADs are effectively a closed-back design. Yet the fine detail that allows the Grados to reveal many individual voices is less apparent here, with the effect being more like background chatter.

Musically the NADs are a capable performer. While the Paul Simon track has the same slight lack of fine detail, it manages to sound entertaining and punchy with reasonable low-end extension available even at low volumes. The HP50s also exhibit the lowest amount of noise leakage of any model in this roundup, which alone may put them right at the top of your audition list.

Final standings

ALL FOUR HEADPHONES in this test have something to offer, and although we've picked an overall winner your own requirements – even including aesthetic taste – will certainly play a part when it comes to choosing a pair.

THE NAD HP50S – as the most portable – and the Grado SR325is – as the least – are possibly the most specialised. If you are looking for a pair of headphones that you can use mainly with your smartphone or portable media player, but also at home from time to time, the NADs are an excellent option – lightweight, comfortable, controlled and the most affordable of the quartet. On the other hand, if you can live with the considerable noise leakage and limited cable length, the Grado 'phones can do things that no other model here can. The problem for both is that there are better all-rounders available.

It is the Focal Spirit Classics and the HiFiMan HE-300s that battle it out for top spot for this reason. The Focals are a very clever

balance of portable ability and performance at home that gets close to the best in test. Throw in the handsome looks and good build and you have a fine design.

However, if you don't need headphones for use anywhere beyond your listening room, the HiFiMans are hard to beat. Put simply, they sound the most cinematic. They're also more than up to the task with music and can still be used with portable devices – it's only their sheer size that might give you pause for thought when packing them for a day trip. The good build, high comfort and reasonable asking price only reinforce their position as a worthy winner ■





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DIGITAL COPY

Mark Craven discovers that moving house is even more stressful when an AV system is involved – and that his new vacuum cleaner is more powerful than you could possibly imagine

CHANCES ARE, SOME of you may be thinking about moving house. My advice to you is: don't. Okay, maybe you can, but I've learned an important lesson this month, and that's to always consider your AV setup before loading up the Pickfords van.

You see, I've recently moved and am currently fighting a battle of wills with Mrs C over what to do with my home cinema gear. I want to get it fired up as soon as possible. She doesn't.

My new house has a detached garage, and the idea it is to convert this into a dedicated cinema room. However, this isn't the sort of project that can be tackled over a weekend. Before you even get to the stage of choosing carpets and putting luxury cinema seats on credit, there is a lot of very dull groundwork to be covered – damp proofing and compliance with Building Regulations chief among them. **Going from musty garage to sleek, comfy movie den isn't a cheap process** either – so I'm afraid you'll have to wait a while before you can read about my home cinema Nirvana.

A solution in the meantime would be to rebuild my setup in the living room, as it used to be. Only now, having moved, my wife has decided that the room looks great with just sofas, coffee table and TV, thanks, and those hulking slabs of electronics can bugger off. She stamped her foot so hard that Antipodean readers may have felt the aftershocks.

I can almost see her point. No one, given a blank canvas (or, in this case, some freshly painted walls and a frightfully clean carpet), would think, 'What this room really needs is a bevy of whirring boxes, a mass of cables and four-foot tall speakers.' This is why soundbars are popular, and why I've been dreamily flicking through the Artcoustic catalogue, wishing I could afford on-wall speakers with custom artwork grilles.

This is probably why real home cinema remains a niche passion. Unless you compromise on performance, spend extra on discreet gear or remodel your room, it's kinda messy. Personally, I'm not bothered by a bit of clutter, but many people are. Browse any interior design mag and you'll struggle to spot a subwoofer; you might see a wall-mounted flatscreen if you're lucky.

So, my new plan is to send my wife to a day spa, and while she's having cucumber placed over her eyeballs, install my multichannel setup as neatly as possible. Speaker cables will need to be tucked under skirting boards, power leads tied together in a tidy bouquet, and I should probably attach the doors back on to my AV furniture and invest in some IR repeaters. Remote controls can go in a drawer until they're needed, and I'll have to think of a way of transforming the surround speakers into *objets d'art*. Then: wait until she gets home and cross my fingers.

Home cinema is greener than you think!

While moving house, I also bought a new vacuum. A Panasonic model (plasma replacement therapy, perhaps?) from a bricks 'n' mortar retailer. I loved the whole experience, with enthusiastic staff letting me fiddle with attachments while they sold me on the benefits of going bagless. What really interested me was the sales patter, which seemed to place a lot of emphasis on power. My Panny vac, despite being labelled 'Eco Max', bigs up its '1,400W' motor – in the same shop, Panny LED TVs were showcasing their low power consumption. Initial use hasn't resulted in all my bulbs flickering, but if our energy bill does skyrocket, I'll happily tell my other half that, for once, it's not my home cinema's fault... ■

*Have you struggled to integrate your AV setup?
Let us know: email letters@homecinemachoice.com*

While moving house, **Mark Craven** found a pair of dipole speakers in his airing cupboard, and three HDMI cables in the kitchen drawer





FILM FANATIC

Something is very clearly wrong when one of the year's most celebrated films almost bypasses Blu-ray on this side of the Atlantic, believes **Anton van Beek**

ELSEWHERE IN THIS issue (*that would be p97 - Ed*) you'll find the results of a poll that recently appeared on www.homecinemachoice.com asking the site's visitors just how many of the nine Best Picture nominees at this year's Academy Awards they had actually seen.

As it happens I've seen five of them so far – *American Hustle*, *Captain Phillips*, *Gravity*, *Her* and *The Wolf of Wall Street* – mainly due to the fact that I've begun going out to an actual cinema a little more frequently in recent months (it's amazing how discovering a well-run cinema with courteous staff and a consistent standard of AV performance encourages you to return again and again – why don't more of them try it?). The only one of the five that I didn't pay to see on the bigscreen, *Captain Phillips*, was watched on Blu-ray. Something I also expected to be able to do with the remaining four films on the list.

However, for a while this wasn't looking quite as straightforward as I had expected it to be. While three of the remaining four films – *Dallas Buyers Club*, *Philomena* and *12 Years a Slave* – had already been confirmed for release on Blu-ray in the UK in the coming months, the same could not be said of the last film on the list, *Nebraska*.

Alexander Payne's celebrated movie may be a 'six-time 2014 Academy Award nominee' and 'three-time 2014 BAFTA nominee' according to the home entertainment press release that was issued towards the end of January, **but as it turned out, that didn't mean that a UK Blu-ray release for the film was a sure thing**. While Paramount Pictures had already confirmed an earlier hi-def platter for the US, the same studio's UK press release only included mention of 'DVD, Digital, Digital HD and

On Demand'. And the lack of a Blu-ray listing on Amazon showed that this was no mere oversight on the part of the team responsible for drafting the marketing blurb.

Thankfully, by the middle of February, we were informed that Paramount had had 'a change of heart' and would now be releasing the film on Blu-ray after all. Which is all well and good – but this doesn't alter the problem that a major studio gave serious consideration to not giving a Blu-ray release in the UK to what is being celebrated as one of the very best films of the past year.

State of the market

Now, I can guess what some of you are probably thinking at this point: 'Who cares if an arty, black-and-white comedy-drama about some old dude isn't released on Blu-ray? It's not going to deliver any real AV thrills!' But why should that matter? I built up my system because I love films and want to come as close as possible to replicating the cinema experience in my home. Not just because I want to be surrounded by really loud explosions (although I'm a sucker for all of that as well).

I expect that Paramount would have used a similar argument regarding the state of the UK Blu-ray market and the titles that perform well in it to justify its initial decision. But this simply leads to a chicken-and-egg situation: how can the UK Blu-ray market mature beyond action blockbusters if other types of films don't get a release? If I didn't know better, it's almost enough to start me thinking that some of the major studios are close to giving up on Blu-ray – in favour of HD downloads – in the UK altogether... ■

*How do you feel about films bypassing Blu-ray in the UK?
Let us know: email letters@homecinemachoice.com*

Anton van Beek keeps dreaming that one month he'll actually be able to write an upbeat column about the state of the Blu-ray market in the UK





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Right to reply?

While I can see your reasoning in printing and replying to the email from R. L. Ingram in the February issue of your fine magazine [*HCC* #230], I can't help but find his statements condescending to genre fans.

While he may find horror films to not be his taste, the simple fact that so many of the world's directors have explored one of the oldest emotions in such different ways is a reason why it should be celebrated. The horror discs which have been up for review have come from such terrific companies, such as Arrow, who have worked wonders restoring cult classics into great shape for fans and future generations to enjoy. Blu-ray has enabled fans

such as myself the chance to view the works of Argento, Fulci, del Toro and numerous others in the best presentation since their films were captured on celluloid.

For the sake of the fans of cinema which explores the dark side of art, I really hope that you continue to give horror releases coverage. Would an art magazine not show the work of Bacon and Goya just because they are not to some people's taste? If it's not your genre, give it a pass, there are always reviews of the next superhero reboot/cash-grab to read.

Great magazine by the way and if I ever meet The Beek, I will buy him a drink for his great taste in films.

Murray Lothian, via email



Horror movies:
you either
love 'em or
hate 'em

Anton van Beek replies: Firstly, thanks for the offer of a drink – I can usually be found in the Blu-ray section of HMV, Oxford Street, on Saturday mornings...

Anyway, I totally agree with you on the importance of horror

as a movie genre – as you say, it's a subject that has been tackled by many of the world's most acclaimed directors, from Hitchcock and Kubrick to Ridley Scott and, er, Renny Harlin. Likewise, I'm equally chuffed

★ STAR LETTER...

Online film market will become a mess

An interesting future waits in film land, where we are lead to believe Blu-ray is really quite possibly the last physical format that will exist. Online availability will mean that watching films will be available in two different guises, streaming and download.

But before we all clamber on the online bandwagon and eBay our collections, I think consideration needs to be given to the online monopoly that will exist if everyone did just that.

To my knowledge (other than the regional differences and shop deals) the only real upset for some on Blu-ray was that the film used to sell 3D to the masses, *Avatar*, was bound in an exclusive deal with Panasonic.

If we fast-forward to the year in which the online dream has taken hold, how many different

providers would you need to utilise in order to get your film kicks?

Streaming services generally require subscription costs, so what if you are a Lovefilm subscriber and *Avatar 8* is only available via Netflix? And yet Lovefilm has exclusive rights on *The Expendables 12*?

Then purchasing and downloading films to keep will require a lot of space and a lot of bandwidth, especially if you want 4K with HD audio. Again, like streaming, exclusive deals will mean obtaining them from a multitude of sites and services. Okay, you may argue you do that currently anyway for your physical product, but you do this based on price

mostly. The online future will be fixing prices higher and for longer – no more shopping around for the best price.

Then what if your server/disk crashes and you lose the lot? Did you have a backup? Doubtful, as

you would quite possibly have to use physical media to do it!

There is a mess approaching in the online availability world should physical media expire anytime soon, so maybe it's best to have a healthy mix until such time that physical media really is impractical, rather than just ousting it for the sake of a modern future where we are all watching low-quality streaming versions for a high price.

What I suspect may happen is that film consumption will mirror the music industry, where the masses consume low-quality MP3 versions, while those that care continue to buy vinyl and CD products.

So, maybe LaserDisc is to make a comeback in the same way that vinyl has? Stranger things have happened, and who



that some of the smaller Blu-ray labels are putting so much effort into releasing classic titles that could easily be left in the vault amidst the rush to release only blockbuster/modern flicks in HD.

Horror as a genre will always divide opinion, especially as it's so wide-ranging. There's an obvious difference between *The Wicker Man* and *Leprechaun 4: In Space*, after all.

Make AVRs more user-friendly!

I thought it was only me.

What a great article (*Point of View*, HCC #230), I smiled as I read it. I know I shouldn't have.

Well done Richard, you have hit the nail on the head. It seems to be with AVRs that they are too complicated. Friends come round for a film night, I'm telling them how much better it is to watch films at home rather than go out to the cinema... only to spend the next hour wondering where the picture has gone. I just would like to watch a film, not muck about with wires, settings, etc!

Please, manufacturers, we do not all have a degree in electronics – just a nice big remote for my stubby fingers with volume and power buttons would do.

knows – maybe to hold 4K films you'd need a 12in platter!

Neil McAlister, via email

Mark Craven replies: First, I'm thrilled to see you think there's enough life in *The Expendables* franchise to keep going to a twelfth movie...

More seriously, I imagine your concerns are shared by many HCC readers, and the future you're suggesting might not be that far off the mark. It's looking increasingly likely that any 4K disc standard will be very much a niche product. But I'd love to be proved wrong.

Star letter-writer Neil wins a copy of *The Hunger Games: Catching Fire* Blu-ray, which is available to buy from March 17, courtesy of Lionsgate UK.



Just some of HCC reader Patrick's T2 memorabilia

When I bought my new Denon AVR I knew it would have a rubbish manual and that I would not understand the menus but I also knew that it would sound great and be reliable. Yet it's just too complicated. Colour space? What does that mean? Plus loads of other settings I have no idea what they mean or do. The manual explains how to adjust them but not what they are actually for – so I don't touch them. Let's face it, if you get stuck and you see lots of different models every year, what hope do we have?

Dave, via email

Richard Stevenson replies: Thanks for your comments. It is interesting you note the lack of anything remotely resembling clarity in AVR instruction manuals, too. Weighty paper tomes, often in a dozen languages, arbitrarily tell you how to turn features on or off but rarely what actual benefits they offer. The manual to my AV processor is about the same size as the Birmingham telephone directory, yet its total explanation

of the Boundary Gain Compensation setting is: 'Use to compensate for boundary gain.' And despite many GUIs offering a one-line description of features,

these explanations are rarely that informative. On the same receiver the GUI text under the Boundary Gain Compensation explains: 'Turns BDC on/off.'

The move towards purely online manuals gives infinite space for much greater discussion of features, yet few manufacturers have exploited this to date. Most simply offer a PDF download of the paper manual. What about in-depth feature explanations and a searchable glossary of terms and acronyms? If you could embed this sort of info within an app you could view it on the fly, too. Pioneer's interactive manual app gets about as close to this ideal as is available at present, complete with a feature that automatically pulls up the manual page that corresponds with buttons pressed and settings engaged. The explanations still need more depth, but the concept certainly reduces the amount of time your mates are all standing around scratching their heads waiting for a picture to appear.

Mad for Arnie

I really like the *Film Franchise* series of articles in HCC.

When reading about the *AvP* arcade game in the recent *Predator* article I had to think about my game room and all the other things I have from the *Terminator* franchise that could feature in a future *Terminator* franchise 'Collectibles' section: T2 pinball machine, T2 arcade game, T2 1:1 Endoskull, T2 1:1 Endoskeleton Arm, *Terminator Vault* book by Ian Nathan and the *Terminator 2* SACD score by Brad Fiedel. (I have some other nice collectible VHS boxes, with a big T2 metal logo, or an Endoskull/Arnold hologram, a cardboard T3 stand and a big vinyl poster of T4. But these are very hard to find now, I think.)

And I'm not even a Terminator collector, I just love big beautiful movie-related pieces and 1:1 scale movie items. Of course, the

CONTACT US...

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Please note: we cannot guarantee to print/answer all the letters we receive. Sorry.

full-size 1:1 Endoskeleton is on my wish list, but that's the price of a small car – or in HCC terms a very good projector.

I've sent some pictures so you have an idea what the items look like in my home cinema and the rest of my apartment.

Patrick, Belgium

Mark Craven replies: Thanks Patrick. Wow, you must really love the *Terminator* movies! If any other readers want to share their movie-related memorabilia collections, get in touch!

4K? HD isn't finished yet

I read Mark Craven's piece on a recent survey [Digital Copy, HCC #230] showing fewer than a quarter think HD is a 'must-have' with interest, but no surprise. I am an illustrator/artist and keen videographer. The coming of HD has been a marvellous revolution, a very long way from those days when we sat in front of a bulky CRT TV. But I have long noticed that an amazingly large number

of people are visually unaware. They simply do not see! For instance, I have found a number of people saying they have HD, when one finds they do not – and they cannot see it. Or alternatively, as with my brother, they do not see the difference, so stay with SD even when HD is available to them.

This leads to a further topic – 4K. Having watched it on store displays, I can certainly say it is very impressive. However, they are very big screens, usually about 65in. Most of the population have much smaller TVs. My own is a recently bought Sony 42in, the largest I can accommodate in my cottage. Sony's X-Reality Pro engine, carefully calibrated, gives a stunningly sharp picture in HD, with every fine detail, and a splendid contrast and colour. SD, when one has to watch it, is also hugely improved (no, this is not an ad!). My view is that 4K is not going to add much if anything at this size. I also feel that, given the fact that huge numbers of people



have bought and set up HD TV sets, they are not likely to be rushing out to buy 4K, even if 4K becomes widely available. So yes, Mark, people continue to amaze, setting up their timeshift settings and seeing the world with blurred vision.

Roger Payne, via email

Mark Craven replies: 4K TVs certainly are large when compared to most people's displays. The industry started

4K screens are increasingly common, but are they too big for most people?

with 84in and then moved on to 65in and 55in. The good news is that this year will see some 49in and 48in 4K sets, which will no doubt also be more affordable than the first-generation behemoths. What will then be interesting is whether the benefits of the 4K resolution are so immediately obvious at that screen size ■

Win! Three great Blu-rays up for grabs

Just email your answer to Competitions@homecinemachoice.com to be in with a chance



WIN Gravity

The heart-pounding sci-fi sensation *Gravity* starring Sandra Bullock and George Clooney is now available to buy on Blu-ray 3D™,

Blu-ray™ and DVD – and thanks to Warner Home Video we've got five copies of the Blu-ray 3D up for grabs...

Question:

Gravity director Alfonso Cuarón previously helmed which Harry Potter sequel?

Answer:

A) ...The Chamber of Secrets B) ...The Prisoner of Azkaban C) ...The Goblet of Fire
Email your answer with '**Gravity**' as the subject heading – and include your postal address!



Ender's Game

The long-awaited film adaptation of Orson Scott Card's celebrated 1985 sci-fi novel *Ender's Game* makes its debut on Blu-ray and DVD on March 10. To celebrate

the release those lovely people at EntertainmentOne have given us five copies of the Blu-ray to give away...

Question:

Which of the following characters was played by *Ender's Game* star Harrison Ford?

Answer:

A) Indiana Jones B) Luke Skywalker C) Frodo Baggins

Email your answer with '**Ender**' as the subject heading – and include your postal address!



Escape Plan

Sylvester Stallone and Arnold Schwarzenegger, two of the greatest action legends of all time, come together in the hi-tech prison break movie *Escape Plan*. The film is

available to buy on DVD and Blu-ray on March 17, and thanks to EntertainmentOne we have five copies of the Blu-ray to dish out...

Question:

Stallone and Schwarzenegger first appeared together in which film?

Answer:

A) The Expendables B) Avengers Assemble C) Rambo vs The Terminator

Email your answer with '**Escape**' as the subject heading – and include your postal address!

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WIN A Canton DM 50 soundbase!

This award-winning 2.1 audio solution delivers quality sonic thrills, easy installation and discreet design

CANTON'S DM 50 scooped the coveted Test Winner badge in our recent roundup of 'soundbase' speakers, and UK distributor Computers Unlimited has given us one to hand out to a lucky reader.

Available in black, silver or white finishes, and priced at £399, the DM 50 provides high-quality 2.1-channel audio that easily outperforms the system built into your flatscreen TV. A three-way design, it features two 4in bass drivers, two 2in midrange units and a pair of 1in tweeters to summon up an astonishing full-range sound performance,

driven by a 200W amplifier. Connectivity includes coaxial and optical digital audio for easy hookup to a TV, plus a stereo analogue input and a subwoofer output should you want to partner the DM 50 with a separate woofer. Additionally, built-in Bluetooth, with CD-quality apt-X support, enables simplified streaming of music from your smartphone or tablet.

Installation is straightforward. The DM 50's low-slung form factor means it can slot underneath your TV, and its high-density fibreboard cabinet can accommodate screens weighing up to 40kg.

Supplied with a dedicated remote – but also controllable via your TV's handset – the DM 50

features onboard adjustments for treble, bass, and lip sync, plus three presets and a virtual surround mode, ensuring you can find the sound that suits your taste.

To be in with a chance of getting your hands on the Canton DM 50 and enjoying its detailed, dynamic and weighty performance, just answer the following question correctly. Good luck!

Question:

Speaker brand Canton was founded in which country?

Answer:

- A)** Denmark
- B)** Germany
- C)** Sweden

Email your answer, plus your name and full address, to: Competitions@homecinemachoice.com – with '**Canton**' as the subject



The DM 50 features two down-firing bass drivers and rear-side digital inputs

For more information on Canton's DM 50 visit: www.unlimited.com/canton

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WHY YOU NEED TO CONSIDER CALIBRATION

If you've invested in a quality TV or projector then it can pay to invest a little more in a professional calibration. We quiz ISF-certified calibrator **Steve Withers** on everything from the tricks of the trade and the results you can expect to what you can do yourself



Even a budget TV can benefit from a basic calibration, says professional tweaker Steve Withers

What's the typical fee for an ISF (Imaging Science Foundation) calibration?

Between £200 to £250, although of course a calibrator may charge more if they have to travel a considerable distance. The fee may also increase if the system in question is especially complex, such as a projector and video processor combination. Although, generally, if you have more than one display a calibrator will charge a reduced fee for each additional screen.

Is there a point (screen size, cost of screen) where a pro calibration probably isn't worth it?

It would be uneconomic to spend £200 calibrating a TV that only cost that amount itself, so generally it tends to be the more expensive models that people enquire about. Certainly, if you've spent a considerable amount of money on a new screen, you really owe it to yourself to get the very best out of it. Although just because a TV is cheap that doesn't mean it can't be calibrated – LG, for example, includes extensive calibration controls on even its entry-level models. When it comes to screen sizes, the larger models also tend to be the more popular in terms of calibrations – it would be hard to justify the expense for a 24in TV in the kitchen. However, it's worth remembering that any display can benefit from a calibration, even if it's just a basic setup that you perform yourself.

What's the objective of a calibration? What results should people see?

An excellent question and probably the one most commonly asked of any calibrator! There's a great deal of confusion surrounding the concept of calibrating a TV or a projector and people often ask why calibrate at all – shouldn't the display be perfect when you buy it? The simple answer is 'no', because that would mean individually calibrating each screen in the factory – both impractical and expensive. In addition, any calibration in a factory wouldn't take into account your own viewing environment, nor would it be able to allow for a running-in period. Prior to any calibration, you would need to run a new TV in for between 100 and 200 hours and, in the case of a projector, put at least 50 hours on the bulb.

The primary objective of an ISF calibration is to ensure that the display conforms to the industry standards. All the content that we currently watch, be it broadcast TV, DVD or Blu-ray, is created using a set of industry standards – specifically the colour of white (D65) and the colour gamut (Rec.709). A pro calibrator will use the display's controls to ensure that it matches these standards as closely as possible. By doing so the customer knows that the picture they are watching is exactly what the content creators want them to see. An example that is often quoted is *The Matrix*, where the directors (the Wachowski brothers) used a very deliberate colour scheme to subtly differentiate between scenes in the real world (blue) and scenes in the Matrix (green). When the film was being transferred to DVD and Blu-ray, the Wachowskis would have been looking

'Remember that any display can benefit from calibration, even if it's just a basic setup that you perform yourself'

at a monitor that had been calibrated to exactly the same industry standards used by every professional calibrator. So if you have your display calibrated, you can guarantee that the image you are watching perfectly replicates the creator's intent.

Whilst the primary goal is ensuring that the display matches industry standards, there are other benefits to be gained from a professional calibration. The calibrator will also seek to optimise the display's performance in terms of its dynamic range (the difference between black and white), its video processing, and the overall brightness of the image.

They'll also turn off all those unnecessary picture features that manufacturers love to add but which rarely have a positive impact on picture quality. Furthermore, the calibrator will create Day and Night settings, designed to optimise the TV's performance for different viewing environments. You don't want your TV too bright at night when it's dark because

that can be fatiguing for the eyes but, conversely, you might need a brighter image during the day when there's a lot more ambient light in the room.

A calibrator will also create a 3D setting using the same industry standards, but this time adjusting for the effect of the 3D glasses themselves. This is achieved through a highly technical process of taping the glasses to the front of the meter...

What tools do you use to calibrate?

The three main tools that any decent calibrator must possess are a colour meter, a pattern generator and some form of calibration software. In terms of colour meters I use two, a Klein K-10 and an i1 Pro, but there are many others available. I also use a Sencore MP500 to generate all the test patterns. Again there are others available, but I find the flexibility of the MP500 to be a great help when performing calibrations. You could use test discs as an alternative but that does mean you're dependent on a Blu-ray or DVD player, and navigating through discs takes ages. With a dedicated pattern generator I know exactly what to expect and the calibration software can control it directly, which significantly speeds up the process.

The final part of the tool kit is calibration software. Personally I use CalMAN, but there are others available such as Chromapure. The sophistication of today's software is staggering and certainly makes the job significantly easier.

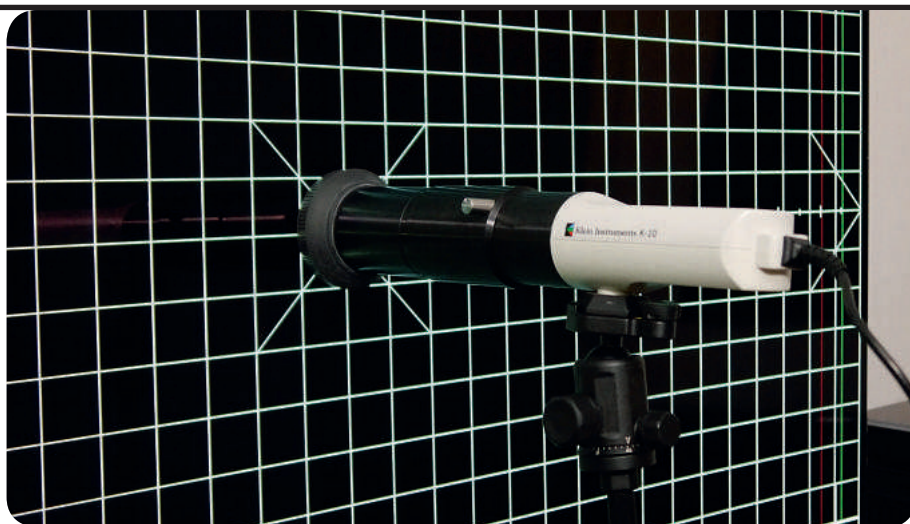
If anyone is thinking of buying the equipment themselves, I should point out that the combined cost of mine is nearly £10,000, so it's probably cheaper just to hire a professional. Besides, all the kit in the world is useless without training and experience, although if a calibrator turns up at your door without at least the three key tools I've mentioned, be wary. Anyone who says they can calibrate greyscale and colour gamut by eye is lying.

How long does the process take?

It will vary from calibrator to calibrator and depend on the number of calibration controls available on the display itself. The more comprehensive the controls the better, but the longer it takes. I usually spend between three and four hours calibrating Day, Night and 3D settings, although it does depend on how much talking I do and how many questions the customer asks! I could perform the calibration quicker than that but I like to take the customer through the entire process, explaining what I'm doing and why. I feel it's important that the customer understands the theory behind a calibration and, since they tend to be AV enthusiasts, hopefully they find it interesting and educational.

So, take us step by step through the calibration process...

The same basic process applies whether you're calibrating a Day, Night or 3D setting and the ISF provides a very useful workflow as part of CalMAN. I use it not only because it takes the calibrator through each step but also because it produces a comprehensive report that shows the before and after measurements. So the first step is to measure



A colour meter, such as the Klein K-10 (pictured above) and a test pattern generator such as Sencore's MP500 (left) are key parts of a professional calibrator's arsenal

the greyscale and colour gamut using the mode and settings on the display when I first arrived at the customer's house. This provides the software with the pre-calibration measurements that will be used in the final report.

After this I select one of the ISF modes if available or, if not, the Cinema/Movie mode and make sure that all the picture processing features have been turned off. These are almost always detrimental to image quality. I also make sure that for hi-def content the aspect ratio is set to pixel mapping, meaning that any 1080p source is being precisely matched to the panel. Any sharpening or edge enhancement features are turned off because, again, this adversely affects the image quality with HD content. I also deselect any frame interpolation features. Frame interpolation can be useful with fast-paced sports action but I leave that to the personal reference of the customer as it isn't part of the calibration itself.

The next step is to measure the colour temperature and then choose the setting that gets closest to D65 (6,500K). This is the industry standard for the colour of white and almost always this setting is called Warm, although some manufacturers actually call it D65, which is a more accurate description. The higher the temperature the bluer whites look and the lower the temperature the redder; confusingly, manufacturers refer to the lower temperature as warm and the higher one as cool, presumably because we instinctively associate red with hot and blue with cold...

Once I've got the colour temperature in the ballpark, I can then set the Brightness and Contrast controls using test patterns. The pattern that is generally used is called a PLUGE and this allows the calibrator to set the dynamic range (the difference



Steve uses CalMAN calibration software, and gives customers a before and after report so they can see the effects of the process

'Of the major brands, Sony's TVs offer the least amount of calibration control, but do have quite accurate presets'

between black and white) of the display as wide as possible. The wider the dynamic range, the more impact the image has. To do this you adjust the Brightness control, which, despite the name, actually affects the dark parts of the image, and the Contrast control which affects the brighter parts. The general idea is to set these controls so that the dark parts are as black as possible with losing shadow detail (crushing the blacks) and the white parts are as bright as possible without also losing detail (clipping the whites).

After this I measure the gamma curve. This exists in all the content we watch and so, despite the straight line response of modern TVs, this curve needs to be adjusted for in the TV setup.

The higher the gamma number the darker the overall image but for a TV in a normal living room, a gamma of 2.2 would be appropriate. If the customer has a projector in a darkened home theatre then you could use a higher gamma, maybe 2.4 or even 2.6. The reason for checking is that while the display may have a setting of 2.2 that doesn't mean it actually measures at that number and in fact a different setting might be closer. Some displays also offer controls that allow for fine-tuning of the gamma curve, which is useful.

Many of the steps that I've described so far can be done by anyone who has a basic calibration disc. But when it comes to calibrating the greyscale and colour gamut, you need specialist kit. The greyscale, as the name suggests, is a scale going from black to

white in shades of grey and it's the most important part of the image. You can think of the greyscale as a canvas and everything else is laid down on top of it, so if the greyscale isn't accurate then nothing will be. The idea is to get the levels of red, green and blue (the three primary colours) in equal amounts so there is a smooth transition from black to

white in shades of grey, with no discolouration. Almost every display has at least a two-point White Balance control which allows you to adjust the levels of red, green and blue at two specific points and hopefully balance out the entire greyscale. Some displays also include a 10-point white balance for a greater level of control. By correctly setting the greyscale you also calibrate the colour temperature of white precisely and can often fine-tune the gamma, as all three are interconnected.

Once the greyscale has been calibrated and assuming the display has a colour management system (CMS), I then calibrate the colours themselves. I often find that colour accuracy has already improved once I've set the greyscale, which is why I do that first. There are a number of different

types of CMS but the best allow you to adjust the three primary colours (red, green and blue) and the three secondary colours (cyan, magenta and yellow). They should also allow you to adjust the three elements of colour – saturation, hue and brightness. The idea is to use these controls to ensure that all six colours are precisely hitting their targets for the industry standard of Rec.709.

Since all the controls on a display have a tendency to interact with one another, once I've finished with the CMS I then check everything again and fine-tune where necessary. After that I can run the post-calibration measurements, which are used to create the before and after report that I email to the customer. The final step in the process is to make a note of all the settings, copy them to all the other HDMI inputs and, if possible, lock the calibrated mode – as ISF founder Joel Silver is fond of saying, 'the most dangerous thing you can give a client is the remote control.'

Can you work your magic with a screen that isn't ISF certified?

Absolutely. A screen doesn't need to be ISF certified to be professionally calibrated. All that ISF certification means is that the ISF have confirmed that the display in question has the required controls – specifically a white balance for calibrating the greyscale and a CMS for calibrating the colour gamut. In addition there are usually ISF Day and Night modes that an ISF calibrator can access and lock. However, there are plenty of manufacturers who offer extensive calibration controls but for one reason or another, haven't sought ISF certification.

Is there any difference between calibrating a projector instead of a TV? Are ISF-certified projection screens necessary?

The approach to calibrating a TV or a projector is essentially identical, you are still using the same industry standards. However, rather than attaching the colour meter to the TV screen, you point the meter at the projection screen. In the case of projectors, the environment itself therefore plays a huge part in the accuracy of the image, with light reflections from the walls and ceiling affecting both the black levels and the colours. Generally there's very little that a calibrator can do about the viewing environment, unless it's a custom installation and they're involved in the overall design. However, they can at least ensure that the projector is as accurate as possible and performing optimally within the limitations of the environment. Given how much one bulb can differ from another and given how much a decent home cinema projector can cost, it's important that it is correctly calibrated for both the environment and the screen.

The type of screen you choose is a key component of a projected image and the aspect ratio and reflectivity are important factors to consider. The screen doesn't need to be ISF-certified though; the important factor is that the calibration is done with the meter pointing at the screen, thus allowing the calibrator to adjust for its characteristics.

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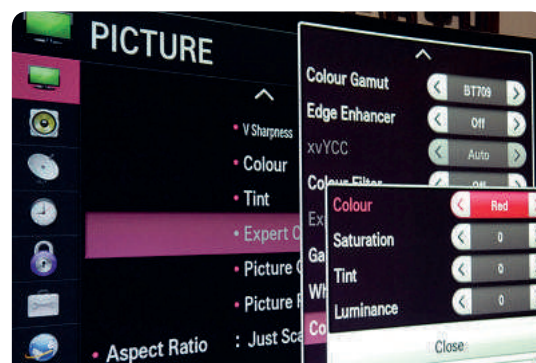
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*1 Typical lamp life achieved through testing. Will vary according to operational use and environmental conditions.

TV manufacturers are increasingly putting comprehensive controls on their high-end displays, and even their more affordable models, too



Are there any projector/TV brands that are easier to calibrate effectively? If so, what do they do right that others don't?

Over the last few years the majority of TV and projector manufacturers have worked hard to improve the calibration controls available on their products. Pretty much any TV or projector will have at least a two-point white balance control, with many now having 10-point and some even going up to 20-point. Of course, they don't always work as well as they should, but in my experience I can usually calibrate a TV or projector's greyscale accurately, regardless of the cost of that display. A lot of displays now also have a colour management system and while they can be somewhat idiosyncratic at times, most do allow for a reasonable level of accuracy. In terms of specific brands, Panasonic and LG TVs offer excellent calibration controls and dedicated ISF Day and Night modes. Samsung TVs don't have ISF certification but they also have a comprehensive set of calibration controls. Of the major manufacturers, Sony offers the least number of calibration controls, with only a two-point white balance and no CMS. However, in fairness its TVs are quite accurate out-of-the-box, making them very easy to calibrate.

Away from ISF, do you have any experience with commercially available calibration discs (Spears & Munsil, Video Essentials, HQV, THX etc)? Are these a good option for those on a budget?

The Spears & Munsil disc, in particular, can be a valuable tool for anyone who is thinking of doing a basic setup themselves. In fact I use it when I'm calibrating to check the final image and ensure that nothing else in the video chain is adversely affecting

the picture. If you have either the Spears & Munsil, Video Essentials or THX disc, then you have all the test patterns you need to correctly set the brightness, contrast and sharpness. So if you're on a budget then get hold of one of these discs and you'll certainly be able to perform a good basic setup of your display. The HQV disc is really designed for testing video processors and wouldn't be suitable for a calibration.

What's the worst thing an owner of a new TV can do in terms of setup?

The worst thing? Not do anything and leave their TV in the default picture mode. If you can't afford a professional calibration or feel that you can't justify it based upon the cost of your display, there are some very simple steps that can be followed to immediately improve its accuracy and performance [see *Five TV Tweaks...*, below]. However, try not to mess with the more advanced settings, such as the white balance and CMS because you really need proper equipment to correctly adjust these controls. You can't damage your display and you can always reset the controls but you just won't have any way to know if the settings are correct. The same goes for using detailed settings that you might find on the internet. It's a total lottery and using someone else's settings on your TV, even if it's exactly the same model, is no guarantee of a better picture – in fact it might make it worse.

Are people usually blown away by the results of an ISF calibration? Or is it more subtle?

To a certain extent, how noticeable the calibration is will depend on how well the screen was setup before

FIVE TV TWEAKS TO MAKE TODAY...

Follow these basic steps to ensure you're getting a better picture

Get in the right mode

Regardless of whether you have a TV or projector, make sure it is in the Movie, Cinema or, if available, THX mode. This will immediately provide you with a more accurate picture that approximates the industry standards. As a general rule, these modes also turn off a lot of the unnecessary processing, so with one touch of a button you're half-way towards a more calibrated image. Avoid Dynamic/Vivid presets like the plague.

Choose the correct aspect ratio

Every TV without exception is shipped in a default aspect ratio that overscans the image. The manufacturers do this so you don't see digital junk at the edge of the image on broadcasts but with high-definition content, this unnecessary scaling robs the image of high-frequency detail. So for hi-def make sure you select the pixel mapping aspect ratio, although you'll need to check the manual because every manufacturer has a different name for it.

Maximise the dynamic range

You'll need a test disc of some kind but this is a cheap and easy way of improving the performance of your display by maximising the range between black and white. Using the PLUGE pattern, set the Brightness control so you can get blacks as dark as possible, without losing shadow detail. You then set the Contrast so that you have a bright image without losing detail in the whites and immediately your picture will have more punch.

the calibrator arrived. Some customers are amazed by the results, whilst others take longer to appreciate the benefits of a full professional calibration. Customers often comment that after a calibration a display initially looks dimmer, less colourful and possibly the whites appear redder. This is because manufacturers ship their TVs in a default mode that is too bright, over-saturated and often with a lot of blue in the whites (adding blue to white makes it appear whiter, but is just an optical illusion. It's one of the oldest tricks in the book and detergent manufacturers have been doing it for years). They do this to attract your attention in a store but it's hardly ideal for viewing at home. After a calibration, the brightness of the display will be set to maximise the dynamic range of the screen while remaining comfortable to look at, especially in the evening.

'I'd prefer it if manufacturers didn't put picture controls on AVRs and Blu-ray players and left the signal pure!'

The colours will also be more natural; peoples' faces and the grass on football pitches appearing more realistic, for example.

Generally I find that after a few days with a calibrated image, customers adjust to the more accurate picture and when they switch back to their previous setting they become acutely aware of the improvements.

Are more people getting screens calibrated than they used to?

Yes, and I think there are two reasons for this. The first is that thanks to organisations like the ISF and THX and publications like *HCC*, people are more aware of the benefits of a professional calibration. The second reason is that the manufacturers themselves are now providing a comprehensive suite of controls on their higher-end models, which means that there is the possibility of getting near-perfect accuracy from a domestic display. These two factors have resulted in more and more

people getting their displays professionally calibrated. Actually, I say people – it tends to be men who enquire about calibrations. To date I've never had a female customer.

Some AVRs are ISF certified: what's the point of this? Surely calibrating the display overrides any calibration on the AVR?

To be honest there is very little point to calibration controls on an AVR, aside from the marketing aspects. When I calibrate a display, I use its own built-in controls and then check that every other part of the video chain (Blu-ray player, AVR etc.) isn't adversely affecting the image. I'd prefer it if manufacturers didn't put picture controls on AVRs or Blu-ray players and just kept the signal pure and unmolested. In my experience the calibration controls on AVRs tend to be fairly basic and crude as well. However, in the unlikely event that your display has less calibration controls than your AVR, they could come in handy.

What's the most expensive setup you've ever calibrated?

I have been involved in a number of high-end installations that have cost hundreds of thousands of pounds but that's for everything and not just the video equipment. The single most expensive display I've calibrated is the SIM2 3D-S, which clocks in at over £30,000. Absolutely stunning picture though, so at least you get what you pay for.

Do 4K TVs/projectors require anything different in terms of calibration? Or is the process the same?

As it currently stands, the process for calibrating a 4K TV or projector is identical to that for a Full HD display. That's because what little 4K content there is still uses the same colour temperature for white (D65) and colour space (Rec.709) as hi-def content. This may change, of course, and there is talk of using a wider colour space, possibly DCI or Rec.2020, for a future 4K standard. I can already measure these wider colour spaces, so if the standards do change, I'll still be able to calibrate future 4K displays ■



Stunning picture: Steve's most expensive single calibration job was SIM2's £30,000 3D-S projector

Avoid sharpening

If you're watching an HD picture on an HD display then you're already seeing all the detail that's available. Controls such as sharpness or edge enhancement can't add what isn't there and in actual fact they often mar fine detail and add unwanted artefacts. So turn them off or set them to the point where they aren't adding sharpening. This is easy to do, just choose a still image with fine lines and look out for any edges or 'ringing' around them.

Make sure film looks like film!

Almost all TVs will ship with their frame interpolation feature on, usually in the minimum setting but often higher. This feature smooths motion by adding extra frames based upon educated guesswork and whilst it can sometimes be beneficial for fast-paced sports action, it can be disastrous for movies. The smoothing makes film look more like video and can also introduce unwanted motion artefacts. So if you're a film fan, turn it off!

FILM FRANCHISE

James Bond

Celebrating the British movie series that comes with a licence to thrill...

Skyfall became the first Bond movie to pass the \$1 billion mark at the global box office



IT'S ALMOST IMPOSSIBLE to believe that there was once a time when James Bond wasn't a regular feature of British cinema. For more than 50 years and across half that number of films (including the 'unofficial' *Casino Royale* and *Never Say Never Again*) the suave secret agent has 'kept the British end up' at the multiplex, seducing a bevy of sultry screen sirens and scuppering the plans of countless sinister villains.

Like some of the other franchises covered in this series, outside of fans' general love of

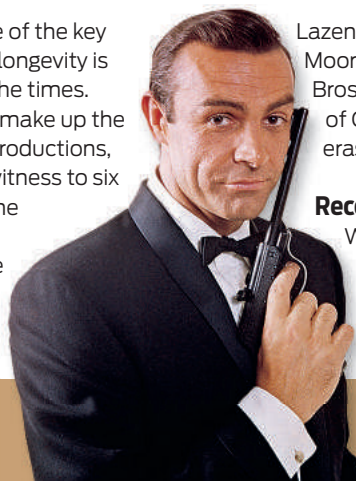
action and espionage, one of the key contributing factors to its longevity is its ability to change with the times. Through the 23 films that make up the 'official' series from Eon Productions, cinemagoers have been witness to six different incarnations of the character – the arrogant machismo of Connery, the tough-yet-romantic

Sean Connery appeared as James Bond in seven films

Lazenby, the suave and self-parodic Moore, the moody Dalton, the gung-ho Brosnan and the blunt back-to-basics of Craig – each reflecting the changing eras in which they played the part.

Record-breaker

While the franchise hasn't been without its occasional box office hiccups (1989's *Licence to Kill* being the series' nadir), the bucketloads of cash brought in by





PICK OF THE BEST...

1 Goldfinger

The definitive Bond movie, this third film in the series established the template that all subsequent entries in the series would follow, from its action-packed pre-credits sequence that isn't part of the main storyline to the extensive use of 'gadgets' (including 007's legendary Aston Martin DB5). The fact that it's also a brilliant movie in its own right doesn't hurt, either...



American Bond: The US TV anthology series *Climax!* gave Bond his screen debut in 1954 with an adaptation of *Casino Royale* that swapped the nationalities of 007 and Clarence (aka Felix) Leiter.

2 Casino Royale (2006)

Despite the glimmer of hope offered by Pierce Brosnan's first two films, by the start of the millennium 007 had (once again) sunk into self-parody. This radical rethink of the series stripped the concept back to basics and gave us a fallible secret agent with (shock!) a crop of blond hair.

3 From Russia with Love

This second James Bond flick is the one that feels the most like a genuine spy thriller, with 007 assisting with the defection of a (glamorous) Soviet consulate clerk while trying to avoid the attentions of SPECTRE assassin Donald 'Red' Grant.

AND THE WORST...

Moonraker

Several of Roger Moore's outings are notable for their attempt to cash-in on the success of other genres (blaxploitation, martial arts), but none were more annoying than this ludicrous attempt to ride the sci-fi boom ushered in by *Star Wars*. From the dire theme song to the surfeit of groan-worthy gags, *Moonraker* aims for the stars but misses by light-years.

COLLECTIBLES

No self-respecting secret agent can afford to miss out on these goodies...

James Bond Archives



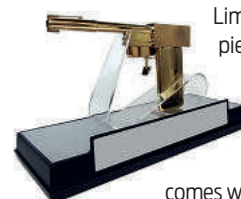
Taschen's sumptuous coffee-table book is packed with rare behind-the-scenes imagery accompanied by an oral history of the series from more than 150 cast and crew members.

James Bond's Aston Martin DB5



First released in 1965, Corgi Toys' 1:46 scale replica of Bond's iconic car boasts a working ejector seat and commands a high-price at auction today. The initial gold model was replaced by a silver version in 1969.

James Bond: The Golden Gun Limited Edition Prop Replica



Limited to just 1,000 pieces worldwide, Factory Entertainment's 1:1 scale official replica of Scaramanga's gun is plated in 18ct gold, and comes with a display base.

GoldenEye 007 (Nintendo 64)



Rare's seminal 1997 video game proved that first-person shooters could work on consoles and introduced an entire generation of gamers to multiplayer mayhem. Updated versions for the Wii, PS3 and Xbox 360 followed in 2010 and 2011.

A real mouthful: The novelisation of *The Spy Who Loved Me* reveals that villainous henchman Jaws is from Poland and his real name is Zbigniew Kryciwki. Try saying that with a mouthful of metal...



2012's *Skyfall* (whose release dovetailed so perfectly with the Queen's Diamond Jubilee and London hosting the Olympics) have certainly ensured that 007 will be donning a dinner jacket for years to come. Daniel Craig has committed to at least two more outings as Bond, with *Skyfall* director Sam Mendes and writer John Logan returning as well for the next movie. And if we do get a bit bored of this Bond, the producers can always shake things up again with a new star, new style and new adventures ■

THE ULTIMATE COLLECTION

You'll need these if you want to complete your library of James Bond discs

Casino Royale [1967] (R2 DVD)
Never Say Never Again (R2 DVD)

James Bond 007 Special Edition Collection: 20-Disc Tin Boxset [*Dr. No to Die Another Day*] (R2 DVD)

James Bond Ultimate Edition Attache Case: 40-Disc Boxset [*Dr. No to Die Another Day*] (R2 DVD)

Casino Royale: Deluxe Edition [2006] (All-region BD)

James Bond 007: Ultimate DVD Collector's Set [*Dr. No to Quantum of Solace*] (R2 DVD)

Sean Connery: Ultimate 007

Edition [12 Discs] (R2 DVD)

Roger Moore: Ultimate 007 Edition [14 Discs] (R2 DVD)

Pierce Brosnan: Ultimate 007 Edition [8 Discs] (R2 DVD)

Casino Royale: Collector's Edition [1967] (All-region BD)

Bond 50 [*Dr. No to Quantum of Solace*] (All-region BD)

Everything or Nothing: The



Happy birthday Bond!

Untold Story of 007 (R2 DVD)
Never Say Never Again (All-region BD)
Skyfall (Region B BD)

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Code HDC18 1 HDMI input to 8 HDMI outputs **£114.99**



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Code VGAHDMIP **£49.99**



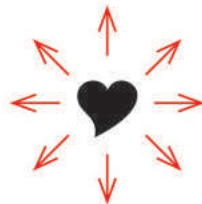
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HI-FI WORLD



5 GLOBES

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PLAYBACK

→ **SOFTWARE HIGHLIGHTS** **THE HUNGER GAMES: CATCHING FIRE** IMAX action adds AV prowess to this smash-hit sequel **ENDER'S GAME** Science-fiction is child's play **ESCAPE PLAN** Stallone and Schwarzenegger are planning a prison break **CAPTAIN PHILLIPS** Tom Hanks tackles piracy **PHANTOM OF THE PARADISE** De Palma's demented rock opera reborn on Blu-ray **AND MUCH MORE!**

Presidential precedent

White House Down → Sony Pictures
→ All-region BD

Terrorists have taken over the White House for the second time in the past year! Can the former 'master of disaster' Roland Emmerich do anything new with the concept? Find out as we give *White House Down* a spin on Blu-ray on p100

HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

Lady Ga-Ga unveiled the new Boy Scouts and Girl Guides uniforms



Hungry for more? You will be...

Improved action and an injection of IMAX magic make for a tasty blockbuster sequel on Blu-ray

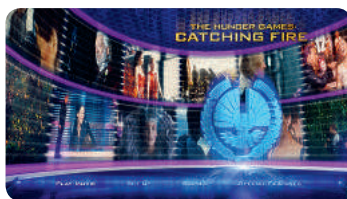
→ THE HUNGER GAMES: CATCHING FIRE

If the first *Hunger Games* was Hollywood's answer to *Battle Royale*, this sequel expands the concept considerably. The first half of its lengthy running time focuses on the political ramifications of Katniss (Jennifer Lawrence) and Peeta's (Josh Hutchinson) victory and the seeds of rebellion it has sewn. Only then do we go finally go back to the games.

Taking over the reins from Gary Ross, incoming director Francis (I Am Legend) Lawrence hits the ground running with this sequel. Equally adept at shooting the personal drama and large-scale action, Lawrence ensures that *...Catching Fire* is bigger and better than its predecessor in every way – everything a blockbuster sequel should be.

Picture: Shot on film, *...Catching Fire* features a strong AVC 2.40:1 1080p encode that is every bit as comfortable with the gritty and desaturated aesthetics in the Districts as it is with the mix of bright colours and endless blacks that dominate the screen during Caesar's interviews with the tributes.

However, things get even better when the film hits the 82-minute mark. As Katniss rides the lift up to the arena the framing opens up to 1.78:1. All of the material for the games sequences was shot on 65mm IMAX cameras and it looks absolutely breathtaking on Blu-ray. Even simple shots such as Katniss emerging through the jungle canopy (Chapter 12) reveal a wealth of intricate detailing and vibrant colouring that dazzles the eyes.



HCC VERDICT

The Hunger Games: Catching Fire

→ Lionsgate

→ Region B BD → £27 Approx

WE SAY: This superior sequel dazzles on Blu-ray with its impressive AV and in-depth bonus features

Movie ★★★★★

Picture ★★★★★

Audio ★★★★★

Extras ★★★★★

Overall ★★★★★

Audio: *...Catching Fire*'s DTS-HD Master Audio 7.1 soundtrack is a relentlessly immersive experience, even if it doesn't have anything quite as show-stopping as the first film's fireball sequence. From the bustling streets of District 12 to a decadent party at President Snow's mansion and the jungles of the arena, the audio design does a superb job of creating convincing soundscapes.

Of course, when the action moves to the arena, the soundtrack steps up a gear or two. The Jabberjay attack in Chapter 14 makes full use of all seven channels to envelope you with a maddening swirl of voices, and when the tributes find themselves caught up in the arena's version of a spin-dryer in the same chapter, the additional rear channels ensure that the steering around the soundstage is utterly seamless.

The disc also includes a Dolby Digital 2.0 track 'optimised for late night listening.'

Extras: Clocking in at a mammoth 145 minutes, *Surviving the Game: Making The Hunger Games: Catching Fire* goes into an insane level of depth in covering the production of this box office sensation. And if you're somehow left wanting more info about how the film was made, then director Francis Lawrence and producer Nina Jacobson are on hand with a commentary. Rounding out the extras are five fairly forgettable deleted scenes.

Now, if that isn't enough, you could always opt for the £75 'Limited Edition Deluxe Set'. Inside the fancy packaging you get Blu-ray and DVD versions of both films, the CD soundtrack, art cards and a bonus Blu-ray disc containing three promo featurettes.

About Time

Universal Pictures → All-region BD
£25 Approx



Richard 'Love Actually' Curtis tries to jazz up his rom-com material with some guff about time travel that he clearly

couldn't be bothered to work out in detail. So in addition to trite sentimentality and stock characters, *About Time* also delivers the aggravation of seemingly arbitrary sci-fi trappings that change to suit the whims of the story. That said, it does at least look very pretty in HD and the DTS-HD MA 5.1 mix adds a layer of musicality to the film with its handling of the pop songs that litter the soundtrack. A commentary, four deleted scenes and three featurettes are among the extras.



The Fifth Estate

EntertainmentOne → Region B BD
£25 Approx



The past few decades are littered with films that have tried – and failed – to make cinematic, exciting

stories based around people tapping away at computers. While this drama about WikiLeaks at least has the benefit of being based on actual events and Benedict Cumberbatch as Julian Assange, it's as much of a misfire as those that came before it. This BD is competent, with a modest DTS-HD MA 5.1 mix and generally impressive AVC 2.40:1 Full HD encode (although some VFX shots are surprisingly soft). Three short featurettes and a trailer are the only extras on offer.



Runner Runner

20th Century Fox → All-region BD
£25 Approx



Online gambling seems to be everywhere these days, so it was a sure fire bet that someone would make a movie

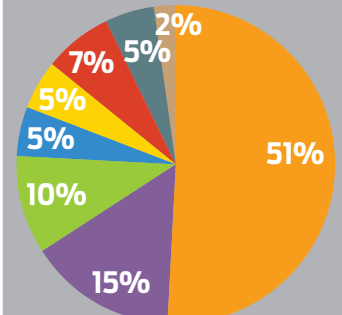
about it. We seriously doubt that anybody ever expected the end result to be such a dull and oddly risk-averse endeavour as this – and nor is it likely that this Blu-ray will get your pulse racing as an AV experience. The AVC 2.40:1 1080p encode is a touch hot throughout and lacks a little precision, while the DTS-HD MA 5.1 mix is far-too front-heavy for much of the running time. A short look at the history of online gambling is joined by seven deleted scenes and the trailer.



WE ASKED...

How many of this year's Best Picture Oscar nominees have you seen?

None of them One Two Three Four Five Six All nine of them



Results from www.homecinemachoice.com
Go online for more polling action



Game over before it's even begun?

Orson Scott Card's celebrated sci-fi novel makes the leap from page to screen

→ ENDER'S GAME

After barely surviving an invasion by insect-like aliens called the Formic 50 years ago, Earth's military leaders have taken the idea that 'the children are our future' to their hearts. Realising that young minds are the most malleable and adaptable, the military now recruits and trains young children to fight and command the space armada that is massing for the inevitable rematch with the Formic forces.

Regardless of the literary franchise it gave birth to, it's easy to see why Orson Scott Card's award-winning novel has been trapped in development hell for the best part of three decades. For all of its 'young adult' sci-fi trappings, this is a ultimately a tale of child soldiers and institutional cruelty, with a young hero who verges on being a psychopath. *Star Wars: The Next Generation* it definitely isn't.

Unfortunately, what worked on the page doesn't quite work so well on screen. While it certainly doesn't shy away from the darker thematic crux of the story, director Gavin (*X-Men Origins: Wolverine*) Hood's screen adaptation seems to struggle with the overall tonal balance. The result is a film that sometimes feels like *Harry Potter* in space, and at others like a cross between *Full Metal Jacket* and *Lord of the Flies*.

Picture: EntertainmentOne's disc features a robust AVC 2.40:1 1080p encode that copes admirably with an often limited colour palette that veers heavily towards greys, blacks and steely blues. A handful of VFX shots look soft, but the many green screen sequences incorporating the actors are surprisingly sharp and detailed.

Audio: The film's DTS-HD MA 5.1 track scores big on fidelity and dynamic range. The Zero-G combat exercises are particularly notable for the excellent audio placement and steering on display. Dialogue is also reproduced extremely well, easily compensating for the slight muffling effect caused by the helmets the young cast sometimes wear.

However, when it comes to the space battles towards the climax, it's hard to shake the feeling that the mix never cuts loose and shows what it's capable of in terms of power and immersion.

Extras: The Blu-ray extras certainly don't skimp on info about how *Ender's Game* made the jump to the bigscreen. In addition to a 50-minute *Making of...* documentary it also offers up a pair of informative audio commentaries (a solo track by director Gavin Hood and another featuring producers Gigi Pritzker and Robert Orci). Finally, there are six deleted/extended scenes with optional commentary.



HCC VERDICT

Ender's Game

→ EntertainmentOne

→ Region B BD → £25 Approx

WE SAY: An interesting, if not entirely successful, screen adaptation that looks and sounds stellar in hi-def

Movie ★★★★★

Picture ★★★★★

Audio ★★★★★

Extras ★★★★★

Overall ★★★★★

The *Ender's Game* saga currently spans 14 novels, with two more on the way



ARCADE ACTION

Bigscreen home entertainment isn't just about movies anymore. Check out these two videogames vying for time on your cinema system...

Forza Motorsport 5

Turn 10/Microsoft Studios → Xbox One → £55 Approx



Xbox One racer *Forza 5*'s headline trick is delivering its huge car collection and decent selection of tracks in beautifully shiny 1080p graphics running at a silky smooth and consistent 60fps – something other titles on the console have conspicuously failed to do.



It also demonstrates Microsoft's online prowess, delivering matchmaking and hosting races flawlessly on Xbox One's new 'cloud' servers. Online races are brilliantly tense affairs, only let down by too many first-corner pile-ups and crash-happy players. By comparison, offline races can feel slightly soulless, with the game's A.I. making it too easy to establish an unassailable lead. The *Top Gear* commentaries and turgid soundtrack damage the atmosphere too.

What's really upsetting some players, though, is the way this full-priced release constantly suggests that you spend more real-world money on fast-tracking your career or buying in-game cars. But to be fair, we personally haven't felt tempted to follow these suggestions, and there's no feeling that adding micro-transactions has impacted the game's structure. Overall *Forza 5* is a showcase of much that's good and potentially bad about console gaming's new generation. Though whether this makes it an essential purchase or merely an academic curiosity is debatable.



Dragon Ball Z: Battle of Z

Namco Bandai → Xbox 360/PS3 → £45 Approx



Thanks to the enduring popularity of Akira Toriyama's original *Dragon Ball* manga strip and ensuing animated adaptations (the 153-episode *Dragon Ball* and 291-episode *Dragon Ball Z*), the past three decades have seen the release of more than 50 licensed videogames. So you'd expect the development teams to have



ironed out all of the kinks by now and perfected the formula, right?

Well, the one thing that this latest game definitely gets spot on is its visuals. Utilising a gorgeous cel-shaded style, *...Battle of the Z* captures the look of Toriyama's artwork perfectly and

makes the game look like an interactive episode of the 'toon. It's just a pity that the camera can sometimes get a little wayward when the action really heats up. Unfortunately, the gameplay isn't up to the same level. Built to encourage teamwork and strategy amongst players (or A.I. companions if you can't round up any chums for a spot of multiplayer action), *...Battle of the Z* is based around battling multiple opponents in moderately-sized arenas. Which would be fine if the actual fight mechanics weren't quite so simple. The addition of collectible cards that boost powers and a huge roster of characters add some much-needed variety to the action – but aside from its visuals, this brawler never really comes close to delivering a real knock-out blow.



Vikings: The Complete First Season

MGM/20th Century Fox
→ Region A/B BD → £35 Approx



The brainchild of *The Tudors* creator Michael Hirst, this series not only takes fewer liberties with historical fact but – thanks to its focus on in-fighting and unusual facial hair – also feels

a lot like a medieval version of *Sons of Anarchy*. As anybody who has ever seen that series will know, this is no bad thing. Shot digitally, the season's nine episodes are spread across three discs and look superb on a big screen, while the DTS-HD MA 5.1 audio is suitably immersive. Extras are generous and informative.



Sherlock: Complete Series Three

BBC Worldwide → Region B BD
£28 Approx



After a break of almost two years expectations were ridiculously high for this latest series. Could it meet them? Of course not, but creators Steven Moffat and Mark Gatiss have

a damn good go with a trio of tonally varied tales, culminating with an absolute corker that forces you to re-evaluate everything that came before. As with the previous HD releases, this two-disc set makes revisiting the show a pleasure thanks to stylish AVC 1.78:1 1080i imagery and DTS-HD MA 5.1 audio. Extras are limited to three featurettes.



Dracula: Season One

Universal Pictures → Region B BD
£35 Approx



This batty UK-US co-production stars Jonathan Rhys Meyers as the titular vampire, inveigling his way into Victorian London by posing as an American entrepreneur. However, his

bloodthirsty mission of revenge is sidetracked when he chances upon the reincarnation of his lost love. Unremittingly daft, but also a lot of fun, *Dracula* looks pretty natty in hi-def, although shadow detail in the 1080i encodes isn't quite as good as expected. More extras would be nice, too.



Thanks to his magic glowing finger, Tom was never scared of the dark

DISC
OF THE
MONTH

Tom's pirate tale is one to treasure

Truth-based thriller defies action movie conventions with its nuanced tale of two captains

→ CAPTAIN PHILLIPS

Based on the true story of the 2009 hijacking of the Maersk Alabama container ship by Somali pirates, director Paul Greengrass' movie stars Tom Hanks as the commanding officer who was taken hostage.

Given the involvement of the US Navy and a SEAL Team in resolving the situation, it would have been easy to turn the story into a triumphalist piece of propaganda. But Greengrass is far too canny to let that happen and devotes as much time to examining the motivations of Barkhad Adbi's pirate leader Muse as he does to Hanks's titular Phillips. And his familiar documentary-style aesthetic helps ratchet up the tension, giving the film a visual authenticity that matches that of its two central performances.

Picture: *Captain Phillips* arrives on Blu-ray with Sony's now-familiar 'Mastered in 4K' banner and is a great-looking Blu-ray encode.

Framed at 2.40:1, the 1080p imagery consistently demonstrates excellent contrast and clarity, even if Paul Greengrass' on-the-fly filming style means that it isn't always the sharpest picture you'll ever see. Colour reproduction is also very



strong across the film's wide palette, while blacks are obligingly deep without obscuring shadow delineation.

Audio: 'Ambience' is the key word when it comes to understanding what makes this Blu-ray's DTS-HD Master Audio 5.1 soundtrack so impressive. The sound

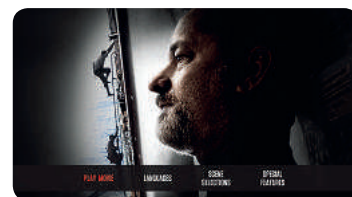
design makes rich use of the full speaker array to bring the onboard locations to life, so before long you're surrounded by the sound of waves breaking against the hull, or struggling to hear over the pounding machinery that echoes through a ship's engine room. Not a bombastic mix – it's more concerned with realism that room-shaking – but a cracker nevertheless.

Extras: First up on Sony Pictures' release is a solo commentary by director Paul Greengrass. Thankfully, the filmmaker quickly proves to be a knowledgeable and engaging speaker, every bit as happy talking about the thematic concerns that attracted him to the project as he is discussing the more technical aspects of the production.

The only other extra is *Capturing Captain Phillips*, a three-part *Making of...* documentary that clocks in at just under an hour. The first part (*Embarkation*) deals with the origins of the project and the real events that inspired it. The second (*Full Ahead*) deals with the casting, technicalities of shooting on the ocean and Greengrass' semi-improvisational style. The final section (*Stand Fast*) looks at the shooting of the lifeboat scenes and the role of the US military in the incident.



The vessel's waste water disposal was a major problem for passing boats



HCC VERDICT

Captain Phillips

→ Sony Pictures

→ All-region BD → £25 Approx

WE SAY: A little short on extras, but this thrilling real-life drama comes highly recommended on Blu-ray

Movie ★★★★★

Picture ★★★★★

Audio ★★★★★

Extras ★★☆☆☆

Overall ★★★★★

The 4th of July indoor fireworks display didn't quite go to plan



Bigger isn't necessarily better

Hollywood's second stab at 'Die Hard' in the White House' is big and dumb, but what about fun?

→ WHITE HOUSE DOWN

When the White House is overrun by terrorists, it falls on the shoulders of one man to keep the president safe from harm...

Hold on a minute. Doesn't this all sound rather familiar? Yes, for reasons known only to itself, 2013 was the year that Hollywood decided to give us not one, but two 'Die Hard' in the White House' movies. And incredibly, despite the fact that *White House Down* stars Channing Tatum, was directed by 'master of disaster' Roland Emmerich and cost more than twice as much as rival production *Olympus Has Fallen*, this is the one that feels like a cheap imitation.

The main problem is that the script deflates any attempt at tension with a string of dumb gags that would have been more at home in some sort of *Airplane*-style genre spoof. A shame, as co-stars Tatum and Jamie Foxx have a surfeit of chemistry together and Emmerich still knows how to stage a spectacular action scene.

Picture: Sony Pictures has served up yet another fantastic looking Blu-ray platter with this release.

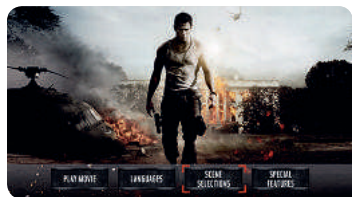
Sharpness and clarity are exquisite, giving the AVC 2.40:1 1080p encode a very clean and extremely well defined appearance (which doesn't necessarily do some of the lacklustre visual effects any favours). Colours are warm and inviting, shadows hold plenty of information and detailing is absolutely first-rate. Quite honestly, no matter how hard we looked, we couldn't find a single thing to criticise here. Put this on your 'reference' shelf.

Audio: *White House Down* is the sort of film that blows up the Capitol Building (Chapter 5), stages a car chase around the North Lawn of the White House (Chapter 11) and eventually drops a helicopter gunship just outside the President's backdoor (Chapter 13). So it's no real surprise that it delivers the kind of DTS-HD MA 5.1 track guaranteed to put a smile on the faces of action-loving AV-hedz.

As you might expect, gunfire regularly rips across the soundstage with authority, explosions are always accompanied by a ferocious subwoofer rumble, and the sound of fighter planes screeching overhead can probably only be bettered by moving next door to RAF Scampton.

Incredibly, the track as a whole is also extremely well balanced. Dialogue is prioritised without sounding artificially lifted in the mix, and the orchestral score (by regular Emmerich collaborators Harald Kloser and Thomas Wander) is rich and dynamic.

Extras: At first glance Sony's Blu-ray platter looks as if it's absolutely packed with extras, offering no less than 13 behind-the-scenes featurettes for you to choose from. But the fact that only one of them runs longer than the disc's six-minute gag reel (vaguely amusing) gives you an idea of how slight the majority of them actually are. Among the topics under discussion are the cast, building the Presidential limousine, stunts, weapons, visual effects, cinematography, what it's like working with Roland Emmerich and recreating the White House. Just don't expect to learn much.



HCC VERDICT

White House Down

→ Sony Pictures

→ All-region BD → £25 Approx

WE SAY: As far as AV demo discs go this is a stunner, but the film itself is something of a letdown

Movie ★★★★★

Picture ★★★★★

Audio ★★★★★

Extras ★★★★★

Overall ★★★★★

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Sly was gutted to see that Arnie had bought the same pyjamas



Ageing action stars behind bars

Sylvester Stallone and Arnold Schwarzenegger team up for the ultimate cinematic prison break



→ ESCAPE PLAN

Ray Breslin (Sylvester Stallone) spends a lot of his time in jail, but not because he's a criminal. Rather, he's a prison break specialist, hired to go undercover in maximum security institutions to find the flaws in their security systems.

But when he's hired by the CIA to test The Tomb – a new facility designed to hold the world's most dangerous terrorists – Ray finds himself in an entire world of trouble. Betrayed by those he thought he could trust and cut off from the outside world, he must turn to fellow prisoner Emil Rottmayer (Arnold Schwarzenegger) for help if he is ever going to stand a chance of escaping from this hi-tech hellhole.

Back in the 1980s any film starring Stallone and Schwarzenegger would have been a guaranteed box office smash. But times change and *Escape Plan* barely made a dent at the box office last year. Which is a shame, because it's actually a much better movie than we expected. The story contains just enough twists and turns to keep you intrigued, and the two leads play off one other brilliantly. There's also lots of fun to be had with Jim Caviezel's turn as The Tomb's sadistic warden Willard Hobbes (you can tell he's a nutter thanks to his softly-spoken nature and love of butterfly taxidermy).

It's a shame that the rest of the supporting players – particularly Sam Neill and Amy Ryan – are wasted in woefully underwritten roles. Although even the handful of minutes that Curtis '50 Cent' Jackson spends on screen is far too generous.

We must add that those expecting the kind of all-out action that a pairing of Stallone and Schwarzenegger would have given us several decades ago will be disappointed. This is much more of a thriller, with a handful of action scenes scattered throughout. Although this does make it all the more satisfying when Arnie finally gets his hands on a massive gun in *Escape Plan*'s closing act.

Picture: *Escape Plan* makes a break for it on Blu-ray with a very respectable AVC 2.40:1 1080p encode. While the film isn't particularly flashy (the interior decorators responsible for The Tomb clearly favour a stark, industrial aesthetic), the occasional wash of coloured lighting holds together very well and close-ups of the leads' faces reveal no shortage of deep wrinkles and clogs.

Audio: This DTS-HD MA 7.1 mix brims with surround activity. Consistently creative and cohesive use of the entire soundstage ensures that you feel just as immersed in the world of The Tomb as the prisoners who languish there, while the dialogue channel isn't overrun. And, once things really start to heat up during Chapter 13's riot sequence, you'll be ducking for cover and fearing for your life.

Extras: Director Mikael Håfström and co-writer Miles Chapman provide an audio commentary, supported by two featurettes looking at the film's production and the on-screen teaming of Sly and Arnie. Meanwhile, a third featurette provides a surprisingly interesting history of prisons and the treatment of criminals. Finally, there's a collection of eleven deleted scenes.



HCC VERDICT

Escape Plan

→ EntertainmentOne

→ Region B BD → £25 Approx

WE SAY: Not necessarily the film fans were expecting, but still a fun thriller that packs a punch in AV terms

Movie ★★★★★

Picture ★★★★★

Audio ★★★★★

Extras ★★★★★

Overall ★★★★★

Filt

Lionsgate → Region B BD
£23 Approx

James McAvoy gives his best performance to date as corrupt copper Bruce Robertson in this adaptation of Irvine

Welsh's 1998 novel. Unfortunately, as fearless as McAvoy is in the lead role, this black comedy is never really as subversive or confrontational as it needs to be and runs out of steam long before the end. The good news is that this Blu-ray handles the difficult imagery rather well (director Jon S. Baird has a penchant for blown-out brightness) and comes with a solid batch of bonus bits in the form of a commentary, interviews and deleted/extended scenes.



In Fear

StudioCanal → Region B BD
£23 Approx

This claustrophobic and downright creepy British thriller stars Iain De Caestecker and Alice Englert as a young

couple lost on a maze of country roads and terrorised by an unseen aggressor. While it may not do anything particularly new, *In Fear* more than lives up to its name, generating a palpable sense of dread that marks it out as a skillfully constructed piece of genre cinema. Oddly, StudioCanal has used the aging MPEG-2 codec for this release, but thankfully it doesn't really impact on the picture quality. A commentary and 52-min *Making of...* are the best of the Blu-ray's extras.



Paranormal Xperience 3D

Kaleidoscope → All-region BD
£18 Approx

At times this Spanish horror flick seems as concerned with making use of its stereoscopy to thrust phones, laptops and camcorders into viewers' faces as part of a product placement deal with Sony. But look beyond this and you're left with an agreeably silly and gory chiller that makes surprisingly good use of its 3D photography. This UK hi-def release lacks extras beyond a trailer, but the stereoscopic 1.85:1 1080p imagery exhibits excellent clarity and dimensionality, and is backed up by an effective DTS-HD MA 5.1 soundtrack.



Demonic Toys

88 Films → All-region BD
£17 Approx

Given his fascination with tiny monsters, it was inevitable that Charles Band would eventually produce

a film about killer toys. And that's just what he gave fans in 1992 with this cheesy horror-comedy (scripted by David 'Batman Begins' Goyer) about a pregnant police woman trapped in a haunted warehouse. This BD release is naturally hamstrung by the limitations of the source material, but on the whole the 1.78:1-framed 1080p encode looks as good as you'd hope, while the DTS-HD MA 5.1/LPCM 2.0 mixes are both cleanly rendered. An archival *Making of...* is the main extra.



Ealing's tales of the unexpected

From haunted mirrors to killer dummies, this classic horror compendium has it all

→ DEAD OF NIGHT

These days Ealing Studios is synonymous with comedies such as *Whisky Galore!* and *The Man in the White Suit*. However, the studio also found success in the 1940s with more serious fare, including a run of war films and this influential chiller.

Endlessly imitated (but never bettered) by countless subsequent portmanteau horror films, *Dead of Night* offers five tales of supernatural linked by the cyclical story of an architect who arrives at a country house only to realise that he has already experienced the same events in his dreams.

Naturally, not all of the stories are entirely successful, but even the least effective (a comedic tale of rival golfers vying for the same woman) ends with a punch line that gets more disturbing the more you think about it. And those that do hit the spot (particularly Alberto Cavalcanti's showstopper about a ventriloquist who believes that his dummy is alive) will haunt you long after the end credits have rolled.

Picture: As with its previous Ealing Studios releases such as *Went the Day Well?* and *Kind Hearts and Coronets*, StudioCanal's Blu-ray release of *Dead of Night* looks very good. While the AVC 1.33:1 1080p encode still exhibits the odd scratch or tramline, there are far more pros than cons to the image. Clarity and stability are both first-rate, and the expansive greyscale range looks very smooth and natural with no unsightly noise evident into the monochrome transfer.

For information on some of the challenges faced by the team restoring *Dead of Night*, check out our exclusive interview on p12.



Be careful who you call a dummy...

Audio: The Blu-ray's LPCM dual-mono soundtrack isn't bad at all for a film that will be celebrating its 70th birthday next year. Naturally, dynamic range is rather limited, but the dialogue, music and Foley effects are all crisply and cleanly presented. The soundtrack is also free from any notable distortion and background hiss.

Extras: *Remembering Dead of Night* is a lengthy talking-heads piece featuring input from critics Matthew Sweet, Kim Newman, Danny Leigh and Jonathan Romney, senior lecturer Keith M. Johnson, actor Reece Shearsmith and filmmaker John Landis. Over the course of 76 minutes, they provide a interesting look back at the making of the film, the themes it tackles and its influence on the genre.

Also included are a four-minute *Restoration Comparison* featuring various 'before and after' clips, plus a gallery of 12 behind-the-scenes photographs. All of the extras are presented at 1080p.



HCC VERDICT

Dead of Night

→ StudioCanal

→ Region B BD → £23 Approx

WE SAY: StudioCanal has scared up an admirable hi-def platter for this first-rate classic British chiller

Movie ★★★★★

Picture ★★★★★

Audio ★★★★★

Extras ★★★★★

Overall ★★★★★



We've got two tickets to Paradise...

Brian De Palma's madcap musical gets a Blu-ray release worth selling your soul for

→ PHANTOM OF THE PARADISE

Brian De Palma's gaudy 1974 rock musical draws on some very familiar sources (*Faust*, *The Picture of Dorian Grey*, *The Phantom of the Opera*), but that doesn't prevent it from being unlike anything else you've ever seen.

A brilliantly funny and surprisingly sharp satire of the music business, *Phantom...* stars William Finley as a naive composer whose music is stolen by music impresario Swan (singer/songwriter Paul Williams).

Hideously disfigured in an accident, Leach begins haunting Swan's new club, only to be drawn into a Faustian pact with his enemy...

Picture: Utilising a restoration of the 'original pre-print material' undertaken by Fox in the US, *Phantom of the Paradise* simply

hasn't looked this good in decades. Arrow's 1.85:1 1080p imagery not only looks great (full of opulent colours, inky shadows and precise detailing), but the Blu-ray encode itself has also been treated with utmost care, ensuring that there are no technical issues whatsoever.

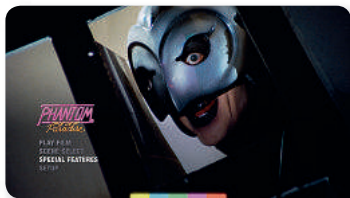
Audio: The disc doesn't put a foot wrong when it comes to the audio either, serving up excellent LPCM stereo and DTS-HD MA 4.0 tracks. Both handle the music and dialogue with ease – and if the 4.0 mix is understandably a touch limited in its surround aspirations, it still helps to open up the musical numbers, making them feel even more immersive.

Extras: Not only does this UK release include all of the extras that appeared on the 2009 French Blu-ray

(51-minute documentary, 10-minute chat with costume designer Rosanna Norton, action figure promo and trailers) it adds a whole lot more.

Among this abundance of new features, the undoubted crown jewels are *Guillermo del Toro Interviews Paul Williams* and *The Swan Song Fiasco*. The former sees the filmmaker sit down with the actor/musician for a 72-minute discussion of his career. The latter is a fascinating 11-minute featurette detailing the changes made during post-production to try and eliminate any imagery relating to the Swan

Song recording label, after Led Zeppelin manager Peter Grant threatened to sue as he had recently launched a genuine record label of the same name.



Eat your heart out
Andrew Lloyd Webber



HCC VERDICT

Phantom of the Paradise

→ Arrow Video

→ Region B BD → £23 Approx

WE SAY: A superb hi-def package that combines excellent AV prowess with a stunning array of bonus features

Movie ★★★★★

Picture ★★★★★

Audio ★★★★★

Extras ★★★★★

Overall ★★★★★

RoboCop: Newly Remastered Director's Cut

MGM/20th Century Fox → All-region BD
£15 Approx



Timed to coincide with the cinema release of the remake, this new hi-def outing for Paul Verhoeven's satirical sci-fi masterpiece is a must-have for fans. While the DTS-HD MA 5.1

soundtrack hasn't changed, the disc's AVC 1.85:1 1080p encode (based on a new 4K remaster) is brighter, punchier and altogether much more impressive than the dull imagery seen on the original disc. And unlike its barebones predecessor this 2014 platter also ports over the majority of the extras from MGM's old Special Edition DVD and finds space for a new 42-minute Q&A with the filmmakers, recorded last year.

★★★★★

The Killers

Arrow Academy → Region B BD
£23 Approx



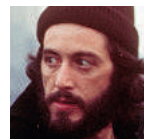
This second screen adaptation of Ernest Hemingway's short story of the same name was originally due to

make its debut as the very first 'made for TV' movie in 1964. However, Don Siegel's fantastically cynical film was deemed too violent for US TV and ended up in cinemas instead. As such, Arrow's Blu-ray sensibly includes both 1.33:1 and 1.85:1-framed versions of the movie, derived from a rather good-looking hi-def scan produced by Universal. Worthwhile extras include featurettes about Lee Marvin and Ronald Reagan and a 1984 interview with Siegel made for French TV.

★★★★★

Serpico

Eureka! Masters of Cinema
Region B BD → £23 Approx



A high point in the careers of both director Sidney Lumet and actor Al Pacino, this true story of a man's battle with

police corruption is a true great of '70s American cinema. So, while it's a pity that Pacino is completely absent from the disc's extras (although a 1979 *Playboy* interview with the actor appears in the booklet accompanying Eureka!'s Blu-ray), in every other sense this release is a triumph. This is particularly true of the AVC 1.78:1 1080p encode, which avoids digital tampering and authentically replicates the rather grainy and rough-hewn nature of the source material.

★★★★★



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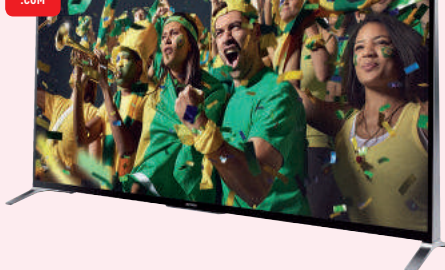
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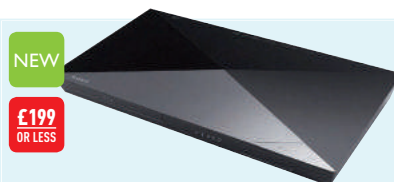


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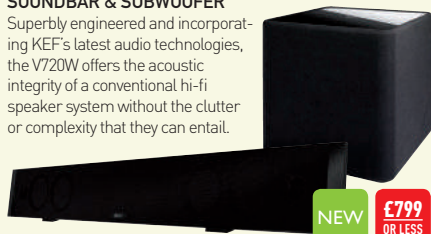
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KEF • E305 • SPEAKER PACKAGE

Inspired by KEF's multiple award-winning 'egg' design, the new E Series packs uniquely advanced technologies in highly distinctive satellite speakers and a powered subwoofer.



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B&W • MT-50 • SPEAKER PACKAGE

This system swaps the PVID for the compact but punchy ASW608 Subwoofer. Available in a matt black and white finishes.

Q ACOUSTICS • Q7000i SPEAKER PACKAGE

Stylish 5.1 speaker package that delivers dynamic sound for movies, but with the ability to play music. Comprises four satellites, a centre speaker plus an active subwoofer in classic black or white matt finishes with a gloss trim.



NEW
£900 OR LESS

SONOS • SUB WIRELESS SUBWOOFER

Seamlessly integrating with a Sonos System, this wireless subwoofer is designed to perform perfectly whether positioned horizontally or vertically, you can put the SUB anywhere you want in the room - even lying flat under a couch.



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REL • HABITAT 1 SUBWOOFER

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NEW

£1299 OR LESS

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SELECT

→ **GEAR GUIDE** **TELEVISIONS** From entry-level 40in LEDs to flagship monster plasmas
BLU-RAY PLAYERS Which deck rules the roost? **PROJECTORS** It's time to blow up your video!
AV RECEIVERS 5.1, 7.1, 9.2 – we've got all the options covered **SPEAKERS** Killer surround sound setups
for all rooms and budgets **PVRs** Including super-slim Freeview boxes and Sky+HD **AND MORE!**



HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

TOP 10 TELEVISIONS

All prices are approx and may have changed

**Samsung UE55F9000** → £3,300

★★★★★

After debuting with a £35,000 85in beast, Samsung enters the sensible Ultra HD TV arena with an absolute star. This neat-looking 55incher offers superb upscaling of regular HD sources and immersive active 3D. *HCC #226*

**Sony KDL-40W905A** → £1,400 ★★★★★

Flaunting the brand's new Triluminos edge LED lighting, this set majors on a startling colour performance, plus crisp delineation and authentic black levels. Pricey, but worth it. *HCC #222*

**Panasonic TX-P60ZT65** → £3,800 ★★★★★

This plasma lives up to its 'Beyond Reference' billing, with the best 1080p picture in town – imagery is effortlessly cinematic. But at this price, you might want 4K... *HCC #223*

**Samsung PS64F8500** → £3,000 ★★★★★

A new panel design has given Samsung's plasma tech a much needed injection of brightness and contrast. The result is a premium bigscreen display that constantly wows. *HCC #221*

**Samsung UE46F8000** → £1,800 ★★★★★

The F8000 tops Samsung's LED lineup (if you exclude the £35,000 S9 Ultra HD set) and is a consistently good performer. Bright, vivid images married to a super-stylish design. *HCC #221*

**Sony KDL-65X9005A** → £5,000 ★★★★★

The first 'affordable' Ultra HD screen we've tested, Sony's 65in next-gen panel is a cracker, offering pin-sharp visuals and brilliant Passive 3D. Blacks aren't best-in-breed, though. *HCC #230*

**Panasonic TX-L65WT600** → £5,400 ★★★★★

With its HDMI 2.0 and DisplayPort hookup, this is the 4K option for those who want a degree of futureproofing. Other 65in rivals are available for less, however. *HCC #230*

**Panasonic TX-P42GT60** → £1,150 ★★★★★

This mid-range plasma still carries much of the technology found on Panasonic's higher-end PDPs, and delivers finessed, film-friendly Full HD visuals. Not very stylish, though. *HCC #226*

**Toshiba 84L9363DB** → £7,000 ★★★★★

An 84in 4K screen for only £7,000 – this Tosh is certainly a bargain. Native 4K impresses in terms of clarity and colour punch, but motion and upscaling can be bettered. *HCC #231*

**LG 50PA650T** → £500 ★★★★★

A 50in plasma TV for £500 is hard to ignore, and this LG rewards thrifty buyers with a solid performance. No 3D or Smart tech here – just bigscreen HD images and neat styling. *HCC #219*

TECH INFO: TELEVISIONS



Plasma or LCD?: The TV market is increasingly dominated by LED-lit LCD screens that are much, much thinner than traditional cold cathode fluorescent lamp (CCFL) screens. For 42in and above, plasma display panels (PDPs) come into play, although LED screens up to 90ins are also hitting the high street – and 85in 4K panels are also on offer. Plasma screens generally offer superior black levels, better viewing angles and less 3D crosstalk, but less brightness and more energy consumption. There's also a limited choice – only Samsung, LG and Panasonic are selling plasma TVs in the UK, and the latter will soon stop.



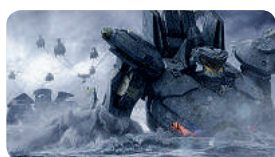
Active or Passive: At the beginning of the 3D revolution, most TVs featured the Active system that uses relatively expensive, powered 3D specs to deliver Full HD images to each eye. Passive 3D TVs, which are increasingly common and now sold by LG, Philips, Toshiba, Sony, and Panasonic, have a filter over the screen and use non-powered specs with polarising filters. The glasses are cheap as chips, but the resolution of Full HD 3D is halved to 540 lines horizontally (but remains at 1,920 vertically). Glasses-free 3D is in its infancy, with just Toshiba's ZL2 set on sale.

TOP 5 BLU-RAY MOVIES

**Fast & Furious 6: Extended Action Packed Edition**

This is pure escapism on a cracking BD disc – the car acrobatics and rapid-fire fist-fights are delivered with pin-sharp 2.40:1 visuals and a precision-steered soundmix.

★★★★★

**Pacific Rim 3D**

While the lack of a 7.1 mix is disappointing, Guillermo del Toro's monster mash still delivers demo-worthy hi-def visuals in both its 2D and 3D incarnations. It also comes loaded with fantastic extras.

★★★★★

**Man of Steel 3D**

Looking for a lossless soundtrack that is guaranteed to push your audio setup to its absolute limits? Then do yourself (and your home cinema) a favour and pick up Superman's latest cinematic outing.

★★★★★

**Rush**

This Formula One biopic is simply magnificent, both in terms of production values/performance and its thrilling DTS-HD 5.1 mix. The BD hosts a nice selection of extras, too – an essential disc for petrolheads.

★★★★★

**Iron Man 3**

This third outing for Robert Downey Jr's superhero re-ignites the franchise, with director Shane Black injecting wry humour into the mayhem. Walt Disney's Blu-ray doesn't disappoint in AV terms either.

★★★★★

Top 10 BLU-RAY PLAYERS

All prices are approx and may have changed

- 1**  **Oppo BDP-103EU → £500 ★★★★★**
 Oppo's first deck for two years was worth waiting for. The universal BDP-103EU features a class-leading build and all manner of bonus goodies, including twin HDMI inputs. AV performance is faultless, and the onscreen menus are superb. A new model, the £600 BDP-103D, adds Darbee Visual Presence processing for you to play with. *HCC #215/#228*
- 2**  **Sony BDP-S790 → £240 ★★★★★**
 This range-topping deck represents a bargain AV purchase. As well as its 4K upscaling, the Sony delivers BDs and DVDs with aplomb, spins SACDs and offers twin HDMI outputs. *HCC #210*
- 3**  **Oppo BDP-105EU → £1,000 ★★★★★**
 This heavyweight deck builds on the premium picture performance of the BDP-103EU with a wealth of audiophile upgrades – if you're serious about music, check it out. *HCC #217*
- 4**  **Marantz UD7007 → £1,000 ★★★★★**
 Marantz's top-line player doesn't bother itself with feature fads like 4K upscaling, preferring to offer faultless BD playback, music streaming (including FLAC) and balanced outputs. *HCC #220*
- 5**  **Pioneer BDP-450 → £230 ★★★★★**
 An affordable universal player, the BDP-450 ignores analogue outputs and concentrates solely on the digital age. Well-built and an assured performer. *HCC #219*
- 6**  **Denon DBT-3313UD → £900 ★★★★★**
 As a 'transport', this universal deck lacks built-in decoders and analogue outs, but partner it with one of the brand's AVRs via Denon Link HD and you'll be rewarded. *HCC #217*
- 7**  **Panasonic DMP-BDT500 → £300 ★★★★★**
 Panasonic's range-topper loves your Blu-ray collection. HD images are sharp and fluid and it doubles as a great Smart hub. The touchpad remote is a bit tricky, though. *HCC #208*
- 8**  **Sony BDP-S5100 → £140 ★★★★★**
 Smaller than many BD decks, Sony's 'Sense of Quartz'-styled spinner offers SACD compatibility and plenty of VOD content. The menu system needs streamlining, though. *HCC #222*
- 9**  **Panasonic DMP-BDT330 → £200 ★★★★★**
 New for 2013, this slim-line spinner is a solid choice, although the Viera Connect portal is beginning to feel a bit out-dated and the DMP-BDT500 (above) offers better features. *HCC #221*
- 10**  **Pioneer BDP-160 → £130 ★★★★★**
 The successor to the BDP-150 adds integrated Wi-Fi, making media file playback simpler. The Smart hub is still practically empty, but SACD support softens the blow. *HCC #227*

TECH INFO: BLU-RAY PLAYERS

Matching your deck to your AV receiver: Blu-ray decks are designed to deliver top-notch images (some do it much better than others, of course) but Blu-ray is also about enjoying superior quality sound. When choosing a player, bear in mind the connectivity and decoding features of your AV receiver. If you're still using an older model that doesn't offer HDMI inputs, then you'll need a Blu-ray player with multichannel analogue audio outputs to enjoy decoded hi-res surround sound formats. Similarly, older but still HDMI-equipped receivers may not be able to cope with 3D video signals, in which case you'll need a deck with dual HDMI outputs – one channeling audio to your receiver amp, the other piping video direct to your TV.

What about the PlayStation?: Sony's console still represents an easy path to hi-def heaven. For a low-budget home cinema system, the £200 PS3 Slim (160GB) makes a decent choice – especially if you like playing games (in 3D, if you fancy it). Control via a joy pad is a pain, though, and the console runs more noisily than most BD spinners. The new PS4 currently doesn't offer 3D BD (or CD) playback.



DEMO DELIGHT

Prometheus: Ridley Scott's return to the sci-fi genre is a treat for your senses, with a crystal-clear HD image and spine-tingling sonics. The 3D presentation of this outer-space horror is impressive too – it oozes depth and proves utterly immersive

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TOP 10 PROJECTORS

All prices are approx
and may have changed**Sony VPL-VW500ES** → £8,800

★★★★★

Sony's second-gen 4K projector is around half the price of the VPL-VW1000ES (below) and comes with HDMI 2.0 chippery and Triluminos colour wizardry. Auditioning this class PJ is a no-brainer. *HCC #228*

**JVC X55** → £5,000 ★★★★★

Armed with a more flexible, second iteration of JVC's e-shift pixel-polishing wizardry, the X55 offers supreme clarity as well as impressive contrast and near-faultless 3D presentation. *HCC #219*

**Sony VPL-VW1000ES** → £17,000 ★★★★★

Sony's flagship projector is an absolute triumph, giving film fanatics the chance to upscale their Blu-ray collection to 4K resolution. The start of a new era? We hope so! *HCC #209*

**SIM2 Super Lumis** → £37,000 ★★★★★

With a more potent lamp than its Lumis forebear, this new light-cannon from SIM2 costs an arm and leg, and is only Full HD, but delivers an astonishing level of performance. *HCC #227*

**JVC X75** → £6,500 ★★★★★

This offers an increased contrast over its DLA-X55 stablemate plus greater calibration options. It's a better performer, too, but whether it's worth the extra outlay is your decision. *HCC #225*

**Sony VPL-HW55ES** → £2,800 ★★★★★

Not one of Sony's 4K models, but this keenly priced Full HD projector delivers where it counts, with solid calibration options, simple setup and brilliant 2D visuals. *HCC #230*

**Epson EH-TW9200W** → £3,000 ★★★★★

A brilliant mid-range projector with wireless HD transmission and ISF certification, yet the noise generated when running in 'Normal' lamp mode could be a concern for some. *HCC #231*

**Panasonic PT-AT6000E** → £2,900 ★★★★★

Panasonic's PJ is a brilliant performer with 2D, but 3D movies could do with an increase in brightness. Maybe that's why you don't get any 3D spex bundled in the box... *HCC #215*

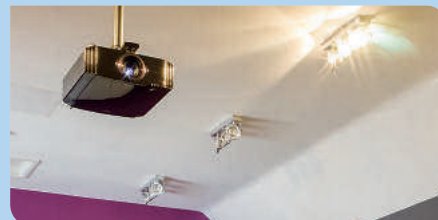
**Optoma HD25** → £800 ★★★★★

Optoma's newest projector provides bright, stable Full HD 3D (with the Active glasses and RF transmitter included) and great-looking 2D visuals for a pittance. A bit noisy. *HCC #220*

**BenQ W1070** → £700 ★★★★★

A brilliant bargain proposition, the BenQ W1070 packs a surprising amount of useful features, including ISF certification. You'll need to fork out extra for 3D glasses, though. *HCC #220*

TECH INFO: PROJECTORS



Installation: Although projectors can be temporarily placed on a cupboard, stand or shelf situated at the rear of the room (use the adjustable feet on its base to level the image so that it aligns with the screen), a much better long-term solution is to mount it on your ceiling with an appropriate bracket. Projectors can be quite heavy, though, so it's important to ensure that the bracket is attached firmly – ideally, it should be secured to a joist. Position your PJ so that an imaginary line from its lens to the opposite side of the room hits the screen exactly half-way along its width. The location of your screen should therefore dictate where your projector is. A decent tape-measure or laser pointer will help you to determine the position.

Throw distance: Throw distance specifies the distance between the projector and screen for a focused image of given size. As the vast majority of projectors are equipped with a zoom lens, minimum and maximum throw distances are often specified – say, 3.01m to 6.08m for a 100in. 16:9 image. Shorter throw distances are ideal for smaller rooms, and longer ones for larger rooms. Simple.

Throw ratio: Sometimes, a manufacturer will quote a throw ratio rather than a throw distance. This is basically the throw distance divided by the image width. To get the projected image size, divide the distance between projector and screen by the specified figure. Once again, the inclusion of a zoom lens means that upper and lower figures are usually specified.

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Modern TVs have become light enough to be installed in your bedroom, according to the rules of ergonomics:

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Top 10 SPEAKERS

All prices are approx and may have changed



KEF R Series 7.1 → £6,500



A 7.1 array mixing both dipolar and direct radiating surrounds, this authoritative package takes its cues from KEF's Blade concept speaker and offers faultless, largescale, home cinema sonics. *HCC #217*



Bowers & Wilkins MT-60D → £2,000 ★★★★★

This 5.1 set sits at the upper end of the sub/sat market, but buyers are rewarded by a potent performance, with the PVID subwoofer dazzling in particular. They look lovely, too. *HCC #212*



Q Acoustics Q2000i → £600 ★★★★★

Another superior sub/sat array from the sonic wizards at Q Acoustics, this marries some surprisingly full-bodied satellite speakers to an easy-to-accommodate 2 x 6in sub. *HCC #211*



Wharfedale Diamond 100 HCP → £950 ★★★★★

Yet another excellent affordable package from Wharfedale, the Diamond 100 HCP offers a sound quality beyond what you might expect from its sub-£1,000 ticket. Maturely styled. *HCC #224*



M&K Sound S150 MkII → £7,150 ★★★★★

A no-nonsense 5.1 package with Hollywood heritage and THX Ultra2 certification, this is all about uncoloured, deeply detailed audio rather than flashy aesthetics. *HCC #225*



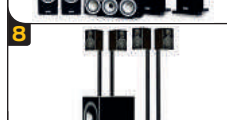
DALI Epicon 5.1 → £17,000 ★★★★★

Not a cheap option, but buyers of this DALI package are rewarded by a sublime performance. Music and movies benefit from high-end proprietary tech; build quality is fantastic. *HCC #222*



Tannoy Precision Series 5.1 → £4,450 ★★★★★

These speakers' classic look belies the brand's hi-fi heritage, but this multichannel setup works wonders with movies, too – a rich, large and dynamic sound is on offer. *HCC #226*



Monitor Audio Radius R90HT1 → £1,500 ★★★★★

The long-loved Radius speakers have been revamped with new drivers and rear ports, and this 5.1 set provides a clear, detailed sound with plenty of heft. Looks good in white, too. *HCC #230*



KEF E305 5.1 → £900 ★★★★★

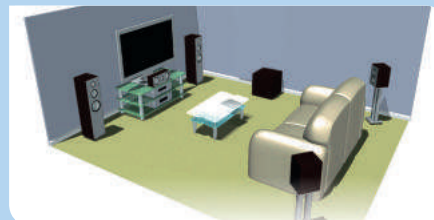
The living room-friendly looks of KEF's newest set of 'eggs' will ensure they get a lot of fans, and sound quality, courtesy of the brand's Uni-Q driver array, is superb. *HCC #222*



Cambridge Audio Aero 5.1 → £1,350 ★★★★★

BMR drivers help to create a wide yet cohesive soundstage, and the balance between potent bass and clear high frequencies suits all material. Bit old-fashioned style-wise, though. *HCC #228*

TECH INFO: SPEAKERS



Centre speaker: Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible. Of course, if you're using a projector screen, it should ideally be placed behind it.

Front speakers: Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

Subwoofer: Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

Surrounds: Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds – it is, in fact, where you should locate the sixth and seventh speakers (rears) in a traditional 7.1 array.

DEMO DELIGHT

Gladiator: While it's often the low-end oomph of your sub that impresses friends and family, the high-frequency poise of your speakers is equally important, lending authenticity to the copious Foley effects that litter film soundtracks. The Colosseum fight sequence in *Gladiator*, with its clashing swords, is a perfect test for your tweeters



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TOP 10 AV RECEIVERS/AV PROCESSORS

All prices are approx
and may have changed**Sony STR-DA5800ES** → £2,200

★★★★★

Sony's follow up to the STR-DA5700ES continues to pack handy features (built-in Ethernet switching, a unique video-on-demand platform), ups the channels to 9.2, and brings a suite of great post-processing modes. *HCC #223*

**Denon AVR-4520** → £2,300 ★★★★★

Denon's flagship AVR sees the brand return to the high-end in style. This 9.2-channel powerhouse mixes subtlety and detailing with brute force and dynamism. *HCC #218*

**Arcam AVR750** → £4,000 ★★★★★

If all you want from an AV receiver is vast power and effortless performance, this high-end 7.1-channel beast is tailored to you. Little bonus features beyond audio networking. *HCC #225*

**Krell Foundation** → £6,500 ★★★★★

One of the US marque's more affordable offerings, the Foundation is a seven-channel processor that delivers an insightful, smooth and epic sound. And it looks fab. *HCC #224*

**Yamaha CX-A5000** → £2,500 ★★★★★

Part of Yamaha's new high-end separates line (you can match it with the MX-A5000 amp), this 11-channel processor sounds clean, precise and offers a dizzying range of features. *HCC #228*

**Marantz AV8801** → £2,500 ★★★★★

The brand's high-end 11-channel processor offers balanced outputs and heavyweight engineering. Partner it with the MM8807 power amp for a supreme performance. *HCC #220*

**Onkyo TX-NR929** → £1,000 ★★★★★

You get a lot for your cash with this 9.2-channel model – built-in Bluetooth and Wi-Fi join THX Select2 certification and excellent connectivity. Creates a large, full-bodied soundstage. *HCC #231*

**Onkyo TX-NR626** → £400 ★★★★★

Packing both Bluetooth and Wi-Fi (without the need for optional dongles) means this affordable Onkyo is ideal for network audio. Multichannel delivery is energetic, if a little brash. *HCC #226*

**Pioneer SC-LX87** → £2,000 ★★★★★

A multi-talented 9.2-channel AVR that excels in terms of clarity and scale. Wi-Fi is via a supplied adaptor, and the UI is beginning to look dated compared to the competition. *HCC #230*

**Yamaha RX-V675** → £500 ★★★★★

The new low/mid-range RX-V675 digs out all the sonic details of your Blu-ray platters and places them across the soundstage. A great-sounding AVR at a good price. Primitive UI. *HCC #225*

TECH INFO: AV RECEIVERS



Tackling new heights: You may find your AV receiver offering Dolby Pro-Logic IIz, Audyssey DSX or DTS Neo: X post-processing – possibly all three. All of these can deliver two further Front Height channels, with the aim of adding weight and control to the front soundstage, particularly in terms of lifting the centre channel and adding scale to vertical surround effects – rainfall for example. The catch is that you will need to add two new physical speakers, mounted near your ceiling above the regular left and right channel cabinets, and make use of two of the receiver's channels of amplification, which could mean forgoing a second stereo zone or rear surrounds speakers. Note that the Audyssey and DTS modes also cater for Front Wide speakers (pictured above), but this idea seems to be gaining less traction within the industry.

How much power?: Many of the mass-market AV receiver manufacturers are involved in a specifications race to see who can say their model is the most powerful, which can be confusing for consumers. For instance, both Krell's £7,000 S-1500 seven-channel power amp and Yamaha's £500 RX-V675 both claim 7 x 150W – the important part is that Krell's figure is into an eight-ohm load with all channels driven, and that Yamaha's is with one channel into a four-ohm load, which is hardly a real-world situation. The best advice is ignore the numbers game and get a demo of your desired AVR with the same, or similar, speakers that you intend to partner it with.

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Top 10 SUBWOOFERS

All prices are approx
& may have changed**Bowers & Wilkins DB1** → £3,250

Featuring a bipolar arrangement of 12in drivers powered by 1,000W of amplification, B&W's stylish flagship sub is a faultless performer, offering both musicality and sheer muscle. Fit to partner the finest of speakers. *HCC #197*

**JL Audio Fathom F212** → £5,900 ★★★★★

The US brand arrives in the UK in style – this 2 x 12in, 3,000W brute not only looks gorgeous, it's capable of a mindblowing performance. Got a big room? Get one of these! *HCC #214*

**Tannoy TS2.12** → £550 ★★★★★

The TS2.12 is easily Tannoy's best woofer yet – using a 12in driver (opposite a passive 12in cone) and 500W amp to deliver a rich, bass performance. Affordable and good-looking, too. *HCC #208*

**Velodyne SPL-800 Ultra** → £1,150 ★★★★★

Proof that even 'small' subwoofers can offer a brilliant performance. The 8in driver is helped by a 1,200W amp and mic-assisted room EQ. Tight and fast. *HCC #201*

**REL Acoustics T-7** → £650 ★★★★★

The T-7 uses an 8in driver in tandem with a 10in passive radiator, and features simultaneous speaker-level and LFE inputs and Class A/B amplification. An excellent all-rounder. *HCC #223*

**Bowers & Wilkins PVID** → £1,200 ★★★★★

On of the coolest-looking subs on the planet, B&W's revamped PVI uses DSP trickery to craft an opulent low-end performance. The touch-sensitive OLED display is pure class. *HCC #212*

**REL G1** → £3,300 ★★★★★

A top-of-the-range woofer with a price tag to match, buyers of REL's G1 can rest assured they're getting a best-in-breed product. Delivers a warm, rich sound with slam and depth. *HCC #208*

**REL Habitat 1** → £1,300 ★★★★★

With its LongBow wireless system and wall-mountable design, REL's newest woofer is aimed at those seeking discreet bass. Twin 6.5in drivers work fast and with considerable grip. *HCC #231*

**SVS SB12-NSD** → £650 ★★★★★

A 12in driver squeezed into the smallest enclosure possible, the SB12-NSD packs a 400W 'Sledge' amp and offers a weighty yet fast and accurate sound. Looks a bit bland, though. *HCC #223*

**Quadral Qube 10** → £525 ★★★★★★

A gorgeous-looking woofer with a build quality that belies its lowly price tag, the Qube 10 takes Quadral's musical heritage and delivers a controlled, poised performance. *HCC #223*

TECH INFO



Why use more than one sub?: Using two subwoofers (or perhaps four) should, in theory, bring huge rewards in terms of bass performance. But remember that LFE is a tricky beast to control. Running two subs may simply double problems in your room like room boom and suck-outs, where outgoing and reflected bass sounds cancel each other out. If you have some flexibility in where you place subwoofers, trial and error may well throw up some interesting results. The acoustics wizard Floyd E Toole (his book *Sound Reproduction: The Acoustics and Psychoacoustics of Loudspeakers and Rooms* is fine bedtime reading) suggests one LFE sub to either side of the room may be best for accuracy while placing them in the front corners would be best for overall bass power. Yet there is no hard and fast rule as to what will work best for every room, and you may find that simply using one (large) subwoofer is preferable as it's the easiest to get sounding right.

DEMO DELIGHT

Oblivion: Joseph Kosinski's sophomore sci-fi flick looks spectacular on Blu-ray, and its visual panache is matched by a 7.1 audio mix that particularly impresses with its low-end extension. The subwoofer channel here is regularly employed, dropping deep and loud to accompany everything from explosions and weapons fire to the roaring engines of Tom Cruise's recon ship. Love your lows? Then love this.

Top 5 HD GAMES

**Dead Rising 3**

Killing hundreds of zombies with an outrageous range of weapons is the order of the day in this delightfully demented sequel. Certainly not the best-looking Xbox One title, but probably the most fun

**Grid 2**

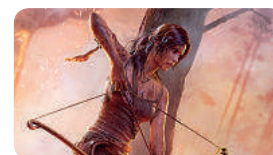
Codemasters' sequel is the king of arcade racers, with the souped-up cars handling like a dream and the opposition's AI ensuring victories are well-earned. Photo-realistic vehicles and environments dazzle.

**Grand Theft Auto V**

Rockstar's newest slice of car-jacking, gun-wielding fun is absolutely massive in both scale and ambition – a big-budget game that will leave a big grin on your face. Graphically gorgeous, and the 5.1 mix isn't bad, either.

**Assassin's Creed IV: Black Flag**

This sequel takes to the high seas for piratical fun, with an enormous open world, absorbing gameplay, beautiful graphics and a soundtrack packed with well-realised ambient effects.

**Tomb Raider**

Lara Croft returns in this fantastic reboot that breathes new life into the third-person action genre. With a great story and quality graphics and sonic design it feels like a Hollywood blockbuster. Just with a joypad.



TOP 10 ACCESSORIES

All prices are approx and may have changed

- 1 Now TV box → £10 ★★★★★**
 An unqualified bargain, this Wi-Fi VOD streamer from Sky (and built upon Roku hardware) brings BBC iPlayer, Demand 5 and the Roku Channel Store to any HDMI-toting telly, plus subscription access to Sky Movies and Sky Sports. The quality of the adaptive bitrate streaming is impressive, and the £10 tag gets you P&P and an HDMI cable. *HCC #226*
- 2 Devolo dLAN 500 AV Wireless+ → £130 ★★★★★**
 Combining Powerline Ethernet distribution with integrated Wi-Fi, this starter kit is a great purchase if you're looking to extend and simplify your home network. *HCC #222*
- 3 Arcam irDAC → £400 ★★★★★**
 Arcam replaces the earlier rDAC with a model that boasts more inputs (now 192kHz capable) and completely revised innards. An excellent performer great for computer music. *HCC #228*
- 4 PSB M4U1 → £220 ★★★★★**
 These closed-back 'phones are excellent all-rounders – agile and clear with music, while possessing enough low-frequency prowess to give weight to BD soundtracks. Comfy, too. *HCC #221*
- 5 Philips Hue → £180 ★★★★★**
 These Wi-Fi enabled lightbulbs might be expensive (this £180 starter pack includes two, plus the Wi-Fi bridge) but making your own multicoloured lighting scheme is a blast. *HCC #220*
- 6 Roku 3 Streaming Player → £100 ★★★★★**
 This step-up streamer builds upon the cute design and simplified operation of the Roku LT with welcome additions including SD card support, headphone input and 1080p video. Neat. *HCC #230*
- 7 Microsoft Xbox One → £430 ★★★★★**
 Not as graphically potent as the PS4 (below) but the new Xbox lives up to its billing as a home entertainment hub – voice control and multi-tasking tricks prove very useful. *HCC #230*
- 8 One For All Simple 4 → £22 ★★★★★**
 A neatly styled and backlit universal remote control, One For All's budget zapper can tackle up to four devices at once and offers easy setup and handy shortcut keys. *HCC #220*
- 9 Bang & Olufsen Beolit 12 → £600 ★★★★★**
 Pricy for an AirPlay speaker, but the performance and rugged build of B&O's semi-portable Beolit 12 justify the outlay; the onboard 120W amp delivers the goods. *HCC #224*
- 10 Sony PlayStation 4 → £350 ★★★★★**
 The PS4 offers a killer gaming experience, with the under-the-hood power resulting in great-looking games. Yet it has a few foibles. Wanna play 3D BDs? You'll be disappointed. *HCC #229*

TECH INFO: MEDIA PLAYERS



What about my TV?: Many flatscreen TVs from the major brands (Sony, Samsung, Panasonic, LG, Toshiba and Sharp) also incorporate media player functionality, using Ethernet or Wi-Fi to stream from your home network, or from plugged-in USB drives. Most modern Blu-ray players offer this, too. However, file support is rarely as extensive as on dedicated devices from the likes of Western Digital and A.C. Ryan, and our experience shows some are more adept at playback from USB than over a network. Nor (obviously) is a TV or BD player portable. If your media collection extends beyond JPEGs and MP3s into lossless audio rips and esoteric HD video formats, then a standalone player is a good investment.

Storage: You can, if you really want, store all your files on a plethora of USB drives, or on your PC, but it's best to get a NAS (Network Attached Storage) device for simplified sharing of your media across a network with



multiple players, such as one from Netgear's ReadyNAS range (pictured). These dedicated devices often offer RAID array file backup, and are managed via browser software. Storage capacity can be anything from 1TB to 12TB and beyond.

TOP 5 BLU-RAY BOX SETS

**Game of Thrones: The Complete Third Season**

More fantastic fantasy TV delivered on Blu-ray – as with previous seasons, the AV quality here ensures the show's big-budget bombast shines through.

★★★★★

**The Walking Dead: The Complete Third Season**

The best series of zombie TV yet, this third run shuffles onto Blu-ray with authentic 1.78:1 HD imagery and atmospheric and spine-tingling DTS-HD MA sonics. Roll on S4.

★★★★★

**Universal Classic Monsters: The Essential Collection**

Bag yourself eight great monster movies given a thorough cleanup by Universal Studios – and marvel at the sheer brilliance of *The Creature from the Black Lagoon* in 3D.

★★★★★

**James Dean: Ultimate Collector's Edition**

Warner Home Video has given *East of Eden*, *Rebel Without a Cause* and *Giant* 4K restorations from their original camera negatives. The result is that these 1950s classics look fab.

★★★★★

**Doctor Who: The Complete Seventh Series**

Audio commentaries, short episode prequels and featurettes are among the extras on this set collecting 15 episodes of TARDIS-based fun. The 1080i transfers impress, too.

★★★★★

MIRROR TV's

Frameless or choice of decorative frames



As seen on 60 minute makeover

	RRP	SPECIAL PRICE
32" LED Smart TV inc. Frame	£1,999	£1,199
40" LED Smart TV inc. Frame	£2,699	£1,499
46" LED Smart TV inc. Frame	£3,499	£1,899
32" 3D LED Smart TV inc. Frame	£2,499	£1,299
40" 3D LED Smart TV inc. Frame	£3,299	£1,599
46" 3D LED Smart TV inc. Frame	£4,199	£1,999
55" 3D LED Smart TV inc. Frame	£5,999	£2,899
70" 3D LED Smart TV inc. Frame	£8,999	£4,499

MIRROR TV OVERLAYS

To fit to your own TV



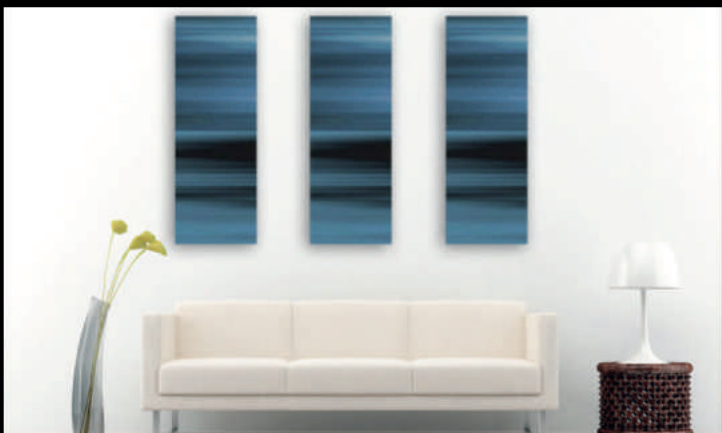
Frameless or choice of decorative frames

	RRP	SPECIAL PRICE
32" Framed Mirror TV Overlay	£1,199	£799
40" Framed Mirror TV Overlay	£1,499	£999
46" Framed Mirror TV Overlay	£1,899	£1,299
55" Framed Mirror TV Overlay	£2,699	£1,699
70" Framed Mirror TV Overlay	£3,499	£2,199

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600mm x 200mm Art Speakers (pair)	£999	£599
350mm x 350mm Art Speakers (pair)	£999	£599
815mm x 375mm Art Speakers (pair)	£1,299	£899
600mm x 600mm Art Speakers (pair)	£1,299	£899

Our flat panel art speakers are available in a range of sizes and designs. Their decorative appearance will complement the décor of any room, filling the space with crystal clear non directional sound.

HD FRONT PROJECTION SYSTEM

No need to turn down the lights



As seen on Peter Andre's 60 minute makeover

	RRP	SPECIAL PRICE
80" 16:9 Framed Screen & Projector	£4,499	£2,999
100" 16:9 Framed Screen & Projector	£5,499	£3,499
116" 16:9 Framed Screen & Projector	£6,499	£3,999

Ultravision provides the ultimate optical front projection screen. High definition 1080p images with superior brightness, contrast and black levels, recreating life-like images with perfect colour reproduction. Package comes complete with Optoma HD25E projector.



Photo: Artcoustic SA and Sphere Custom Design

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The award-winning Home Entertainment specialist

TOP 5 PVRs

**Virgin Media TiVo, £subscription**

This triple-tuner PVR offers ultimate recording flexibility, useful features – you can undelete deleted shows! – and awesome TiVo functionality. A no brainer if you're in a cable area

★★★★★

**Sky+HD, £subscription**

Sky's channel choice is second-to-none and its twin tuner 2TB PVR is a perfect partner. The recent EPG tweak is welcome and Anytime (the push VOD service) is brilliant for catching up on new movies

★★★★★

**Panasonic DMR-HW220, £250**

Panasonic's PVR mixes a 1TB hard drive with its Smart Viera functionality and media streaming – so at £250 it's an absolute steal, regardless of the uninspired design

★★★★★

**Pure Avalon 300R Connect, 1TB, £350**

Pure's debut Freeview+ HD offering is assured. While it can't match YouView for VOD content, the user interface here is unrivalled and four-way HDMI switching a welcome addition

★★★★★

**Samsung BD-F8500, £300**

This 500GB model marries its Freeview+ PVR to a Wi-Fi-toting 3D Blu-ray player and offers copious catch-up TV options – it's just a shame they aren't integrated into the EPG environment

★★★★★

TOP 5 SOUNDBARS

**Yamaha YSP-3300, £900**

A slender soundbar/sub duo that offers a very effective virtual surround performance courtesy of Yamaha's Beam driver tech. Connections include four HDMI inputs – but there's no Bluetooth here

★★★★★

**Canton DM 50, £400**

This sturdily built soundbase speaker may lack HDMI inputs but makes up for it with Bluetooth streaming and a full-bodied 2.1-channel performance. Movies and music benefit from clarity and power

★★★★★

**Monitor Audio ASB-2, £1,000**

This premium proposition marries Monitor Audio's C-CAM drivers with AirPlay and DLNA music streaming. Performance is exemplary – powerful and polished in equal measure

★★★★★

**Philips HTL9100, £600**

A soundbar/sub that incorporates two removable side speakers to allow it to become a wireless 5.1 system, this Philips is a neat proposition. Easy to install and with a heavyweight sound

★★★★★

**Bowers & Wilkins Panorama 2, £1,650**

This second-generation soundbar offers no separate subwoofer and is hardly cheap, but B&W's audio expertise shows through, and HDMI hookup aids installation

★★★★★

TOP 5 SYSTEMS

**Panasonic SC-BTT590, £630**

The use of new bamboo/charcoal drivers and noise-shaping tech pays dividends here, with a classy sound quality to match the wealth of features (3D BD, Smart TV and more)

★★★★★

**Samsung HT-F9750W, £1,500**

Samsung's flagship tallboy array uses a vacuum tube pre-amp and offers unique DTS Neo: Fusion seven-channel processing. Powerful, fulsome sound; packed with features

★★★★★

**Harman/Kardon BDS470, £650**

Harman's 2.1 system eschews 'net TV and streaming features, but majors in heavyweight build quality and solid AV performance. We tested a 2.1 iteration – 5.1 is also available

★★★★★

**LG BH8220B, £650**

With its silver finish, this is a suitable one-box system to partner with LG's flatscreen TVs, with a commendable, if slightly lacking in HF finesse, sound. Additional features including CD-ripping to USB. Handy

★★★★★

**Panasonic SC-HTB570, £350**

A commendable slim-line 2.1 system that can also be clicked together to make a soundbar. The punchy wireless subwoofer does a lot of the work. Bluetooth music streaming is onboard

★★★★★

HOME CINEMA

Choice

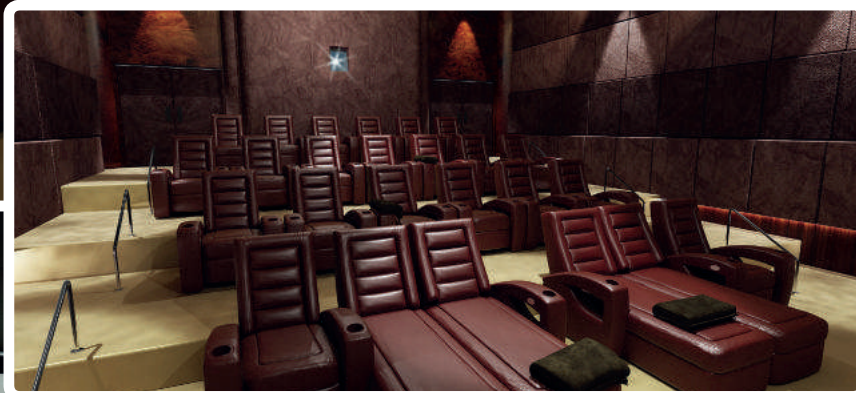
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Auro 3D Everything you need to know about the new Blu-ray audio format
90 years of MGM Looking back, and forward, with the iconic movie studio
Bristol Show 2014 The UK's best AV expo

→ ON TEST

Artcoustic Spitfire custom install speakers
Oppo BDP-105D audiophile Blu-ray player
Marantz NR-1604 AV receiver
Sony W8 Full HD TV
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Editor Home Cinema Choice - Mark Craven



POINT OF VIEW

Richard Stevenson thought he knew everything about speakers. Now it turns out he doesn't, and he's having to reconsider his entire approach to his home cinema

I HAVE ALWAYS been a fan of the phrase 'don't sweat the small stuff'. It was coined by the late Dr Richard Carlson in his best-selling book of the same name; a tome of wisdom that highlighted the dangers of getting hung up on the little details. And so, my home cinema system has always focused on the big stuff: better processing, better amps, bigger loudspeakers. Small things, like speaker cables that cost more than a gold necklace per foot, fancy isolating furniture, mains cables with mystical properties and **projector screen cloth made from hand-picked polar bear fur**, I have sweated not.

Now I am not denying that any of these things make a difference, but the cost-to-reward ratio is often rather slight. Sometimes the reward bit is missing altogether. I once upgraded to a relatively expensive projector screen expecting visual delights and added clarity on a par with laser eye surgery. After some initial disappointment I did a side-by-side test with the old and new screens, only to find the fabric supplied by 'Discount Blinds Direct' offered more visual punch than the pro screen.

Last month I was contacted by a speaker manufacturer, not yet in the UK, who wanted to know if their speakers stacked up against the competition. They sent me two pairs of each model, one set in gloss black, the other pair a dark wood colour. I did initially think this was for me to proffer comment on the aesthetic merits of the various finishes, but no. It was because, according to said manufacturer, its speakers sounded different depending on the colour. Being a man of great diplomacy, I nodded sagely and stifled the guffaws until I got to the pub.

Then, of course, they really did sound different. Switching between the wood-finished floorstanders

and the gloss black proved they were a long way from sounding the same. I examined the contents of my wine glass but even Mrs S agreed. The wood-coloured ones were tighter and faster-sounding; the black ones sounded heavier with bass woolier than a field of sheep. I assumed this must be different drivers, crossovers or construction, so I got the tool kit out. They were, other than the finishes, absolutely identical. I even swapped the drivers between cabinets. The woody ones still sounded better.

It transpires that the difference is in the finishing technique. The black ones are simply painted; the wooden ones have a substantial layer of real-wood veneer glued to the MDF cabinet. The glue and veneer together stiffen the fibreboard, changing the fundamental resonant frequencies of the speaker's panels, particularly the long and wide panels on the sides. Therefore, wood veneered speakers will sound 'different' to otherwise identical speakers with a paint finish.

AV panic stations

This is just the sort of small stuff I don't want to sweat, and now I am. My same-brand, same-model speaker system is a mish-mash of finishes, so could I do better if they were all the same? If the finish of a speaker makes a noticeable difference to the sound, should I borrow some high-end speaker cables to see if there is dramatic improvement? Should I get some fancy support furniture for the equipment rack as an upgrade over IKEA's finest? And mains cables... would my 240 volts be cleaner and better buffed with something other than the supplied IEC leads? Herein lays both madness and financial ruin. I suspect. Damn you, small stuff. Damn you ■

*Does it matter to you what your AV kit looks like?
Let us know: email letters@homecinemachoice.com*

Richard Stevenson hates wood-finished speakers, so this month's revelation is proving difficult to come to terms with





AN ACTION-PACKED APRIL

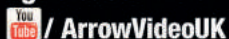
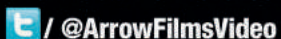
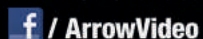


Margot Kidder is seeing double in *Sisters*, the latest addition to our ever-growing Brian De Palma collection, whilst it's curtains for the critics of horror legend Vincent Price in the blood-drenched *Theatre of Blood* – available in both Blu-ray and glorious Limited Edition SteelBook editions! Meanwhile, Chuck Norris and Lee Marvin are back in action and ready to take down a group of political terrorists in *The Delta Force*. Fancy something more cerebral? No problem – this month's Arrow Academy release of the experimental documentaries *Koyaanisqatsi/Powaqqatsi* has it covered.

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** Contrast ratio specifications are for the DLA-X900R.